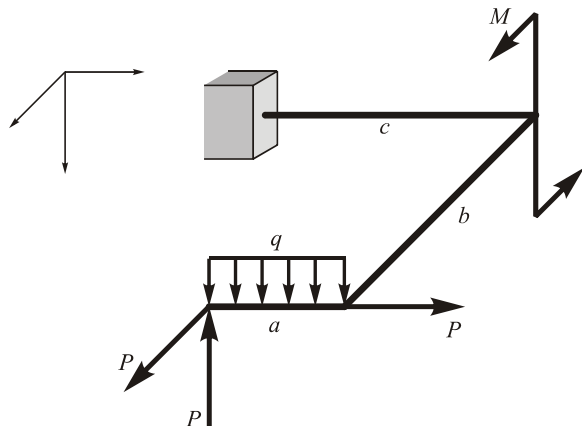


Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 1 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

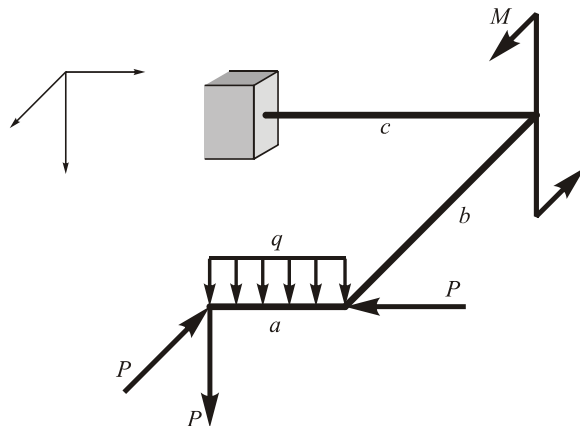
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 2 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

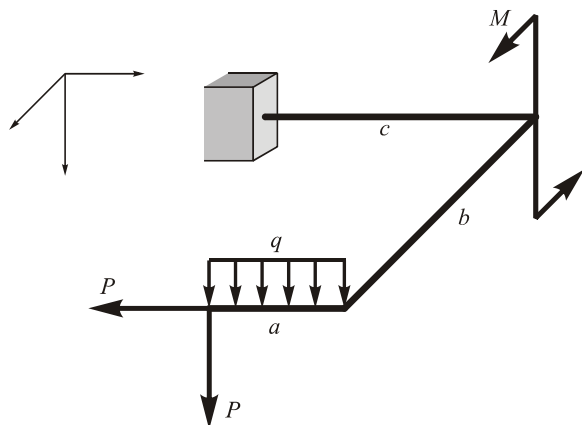
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 3 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

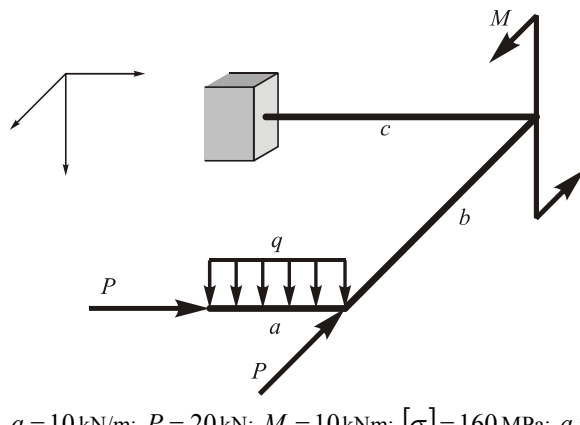
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 4 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

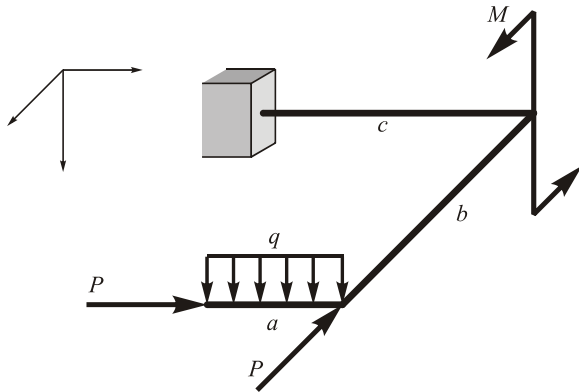
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 5 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

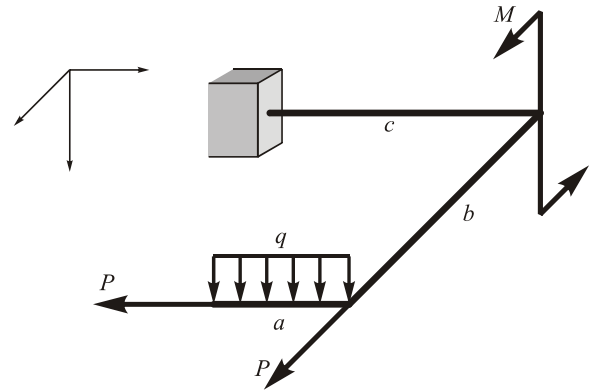
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 6 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

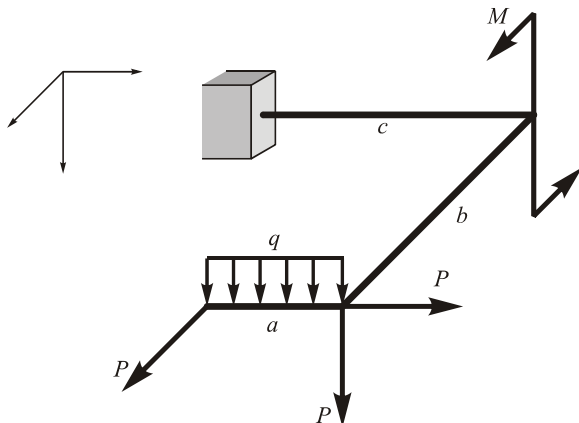
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 7 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

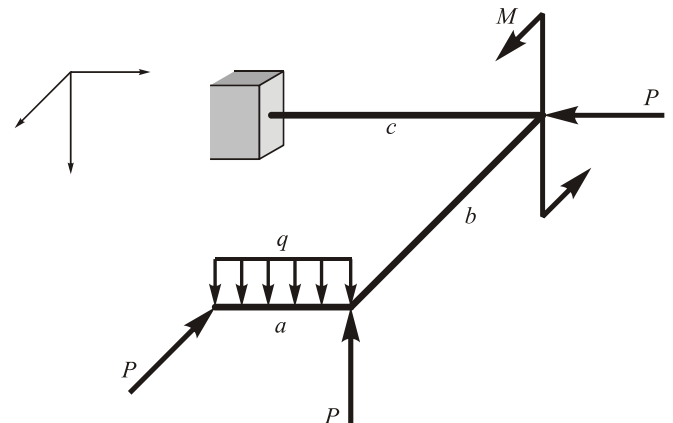
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 8 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

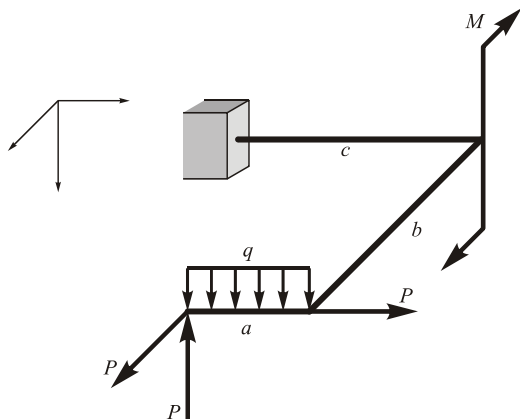
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 9 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

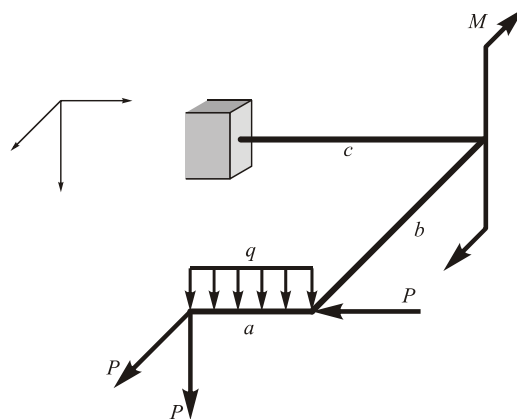
- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer **signature**

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 10 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

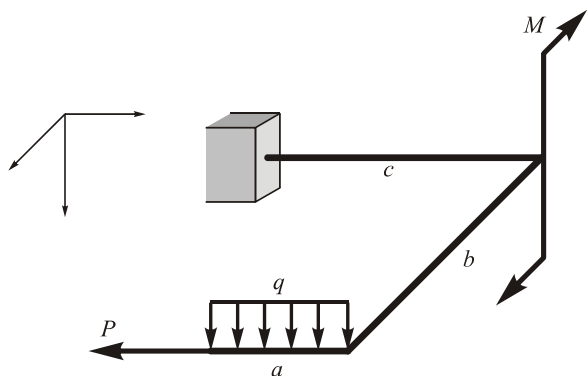
- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer **signature**

Mark:

Subject: mechanics of materials
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Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 11 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

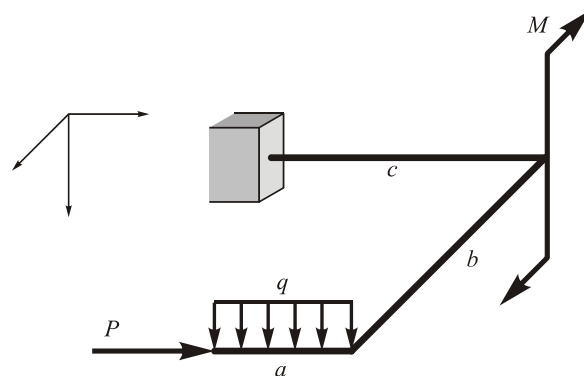
- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer **signature**

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 12 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

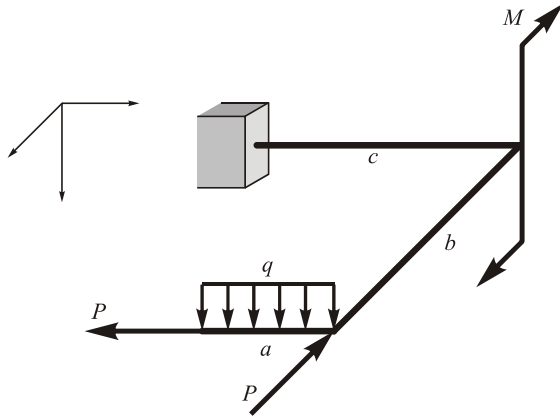
- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer **signature**

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 13 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

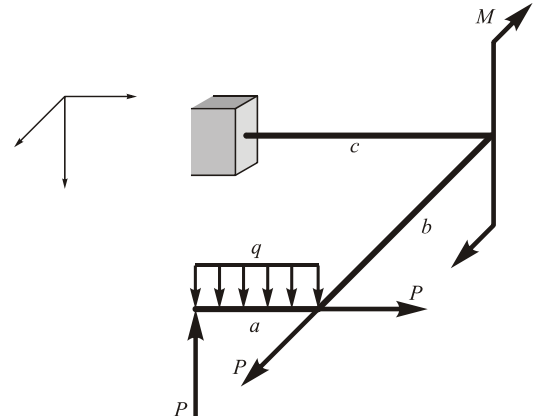
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 14 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

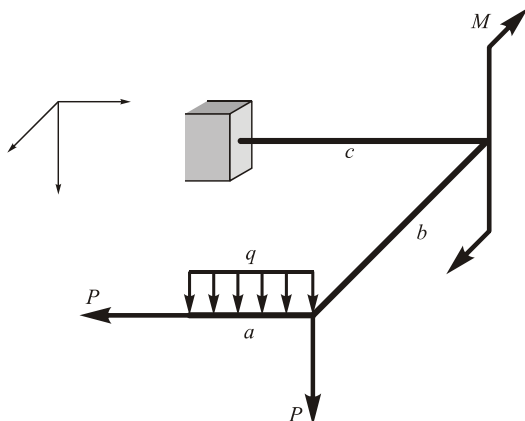
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 15 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

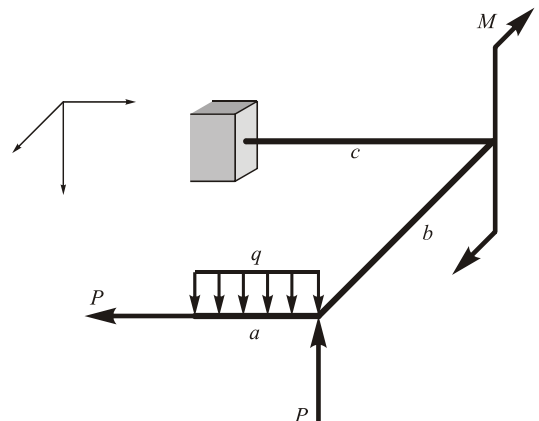
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 16 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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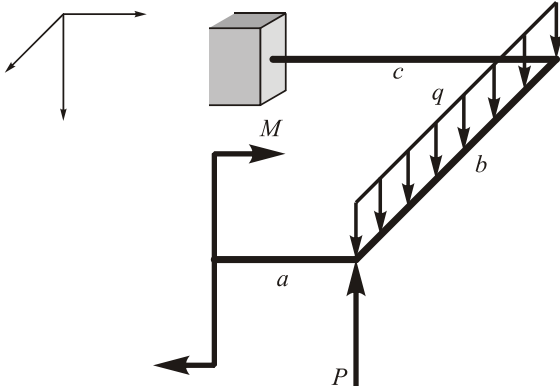
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 17 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

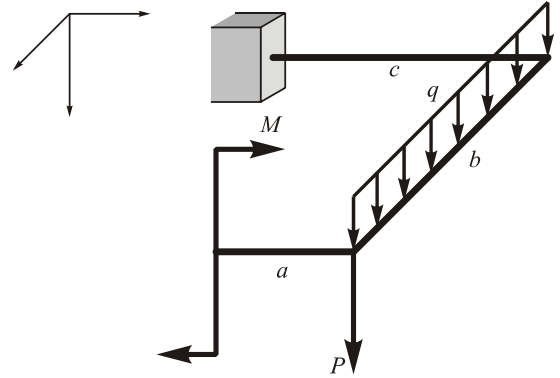
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 18 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

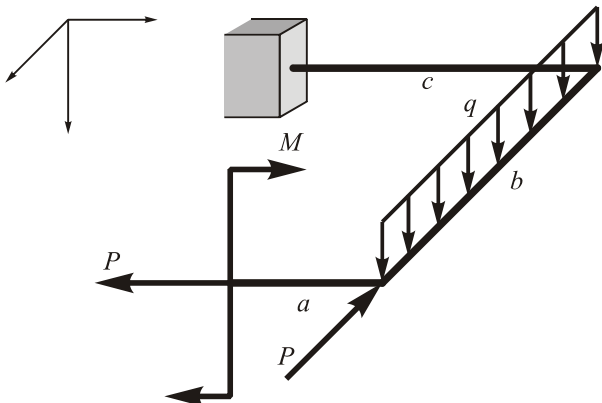
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 19 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

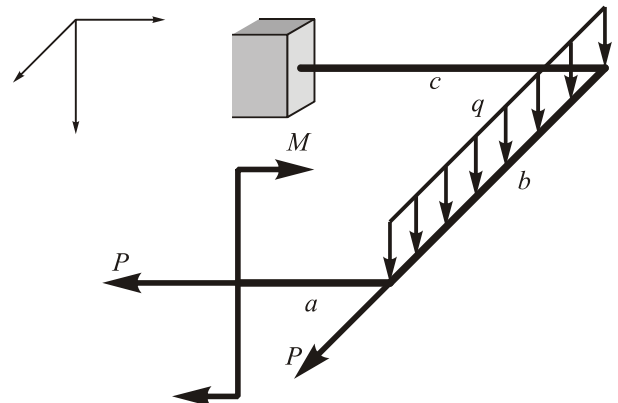
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 20 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

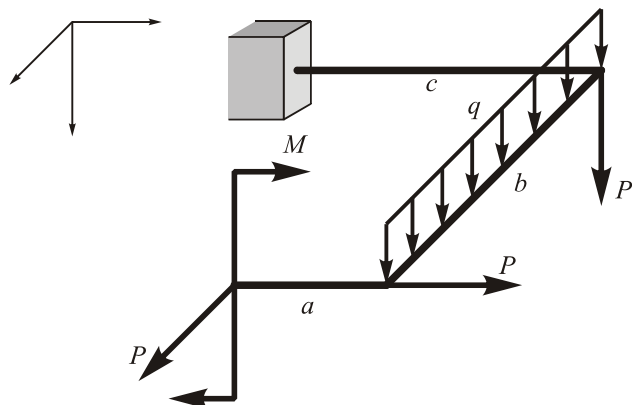
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 21 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

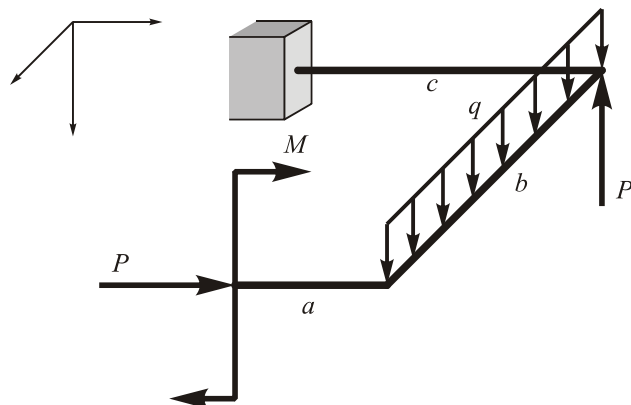
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 22 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

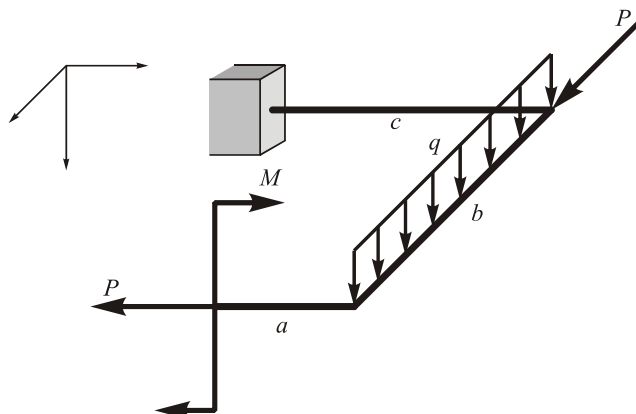
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 23 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

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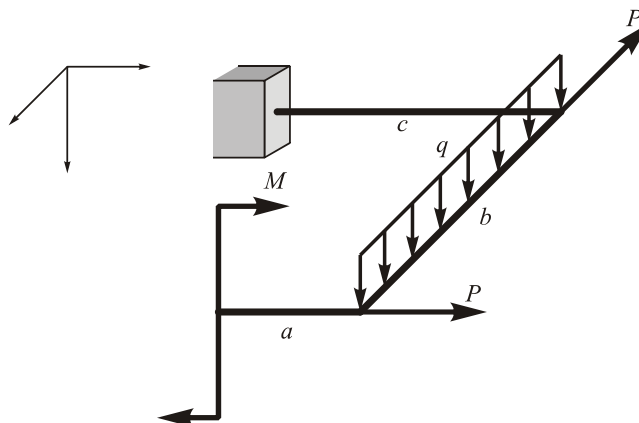
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 24 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

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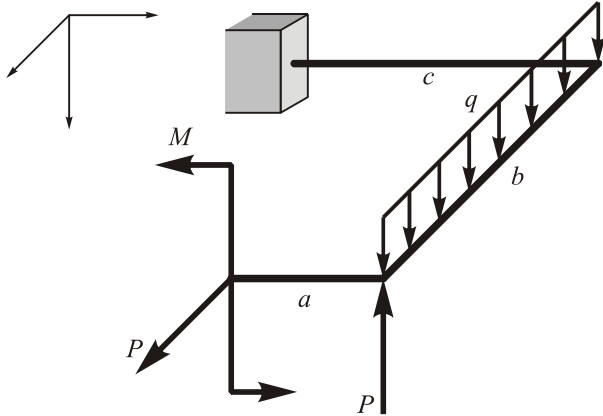
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 25 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

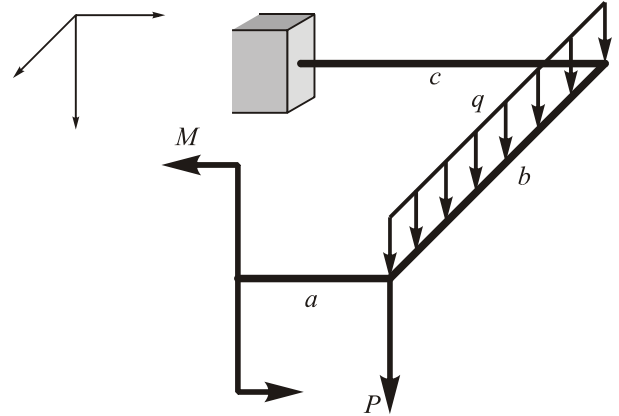
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 26 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

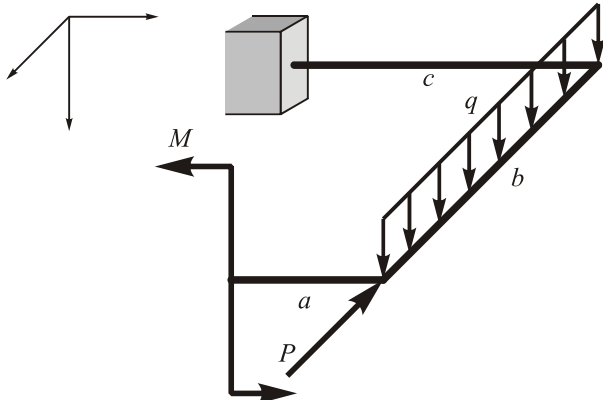
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 27 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

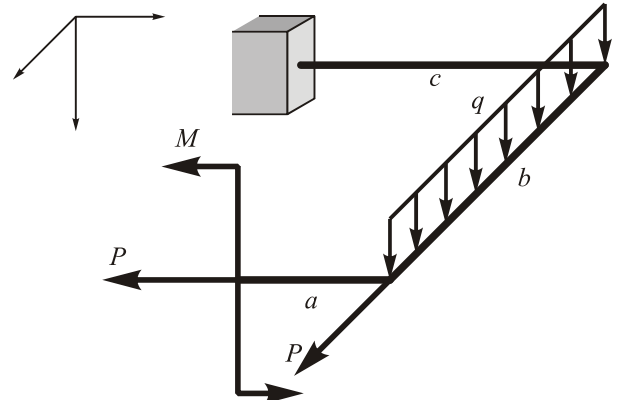
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 28 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

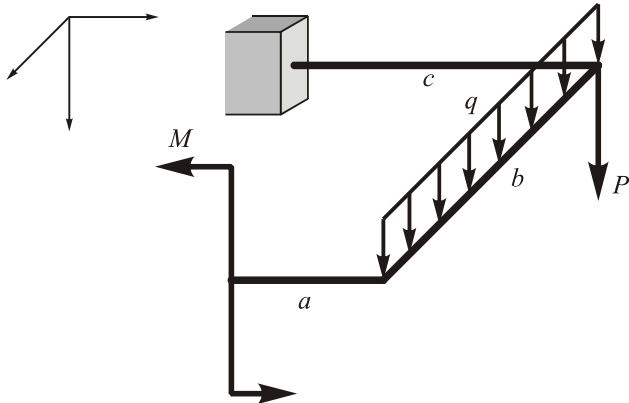
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 29

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

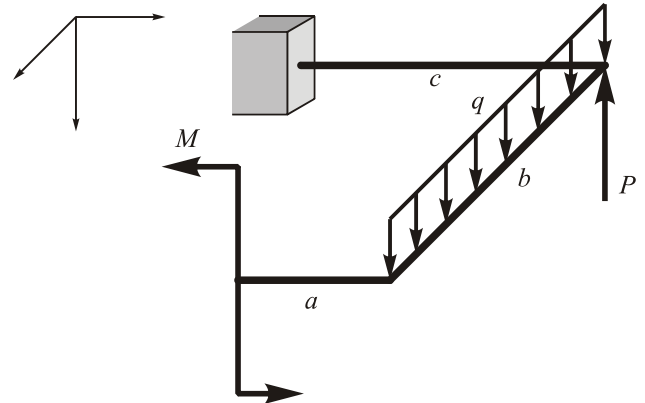
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 30

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

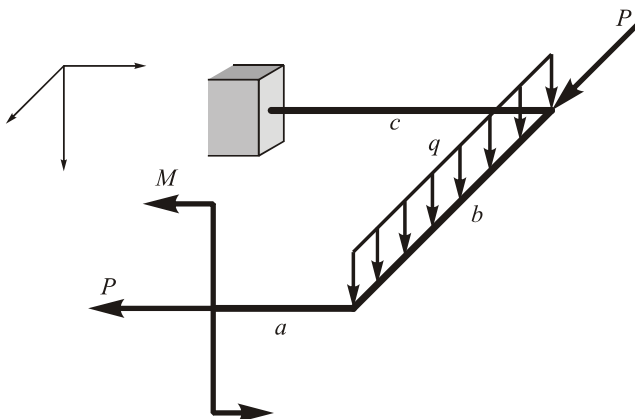
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 31

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

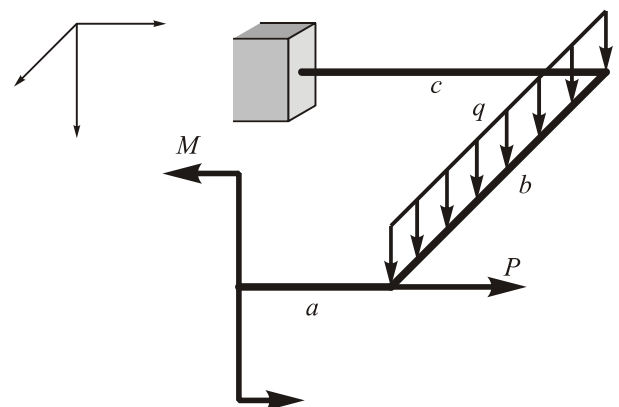
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 32

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

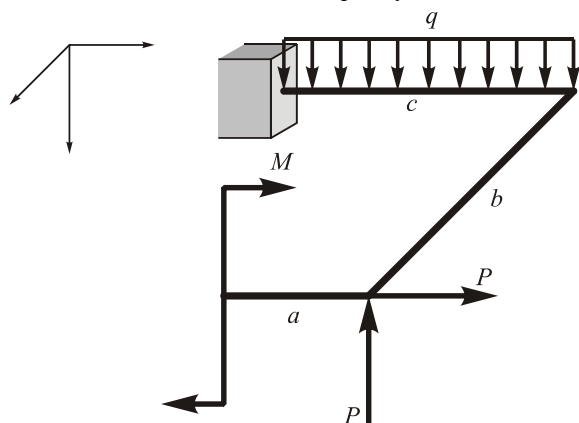
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 33

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
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Full name of the lecturer

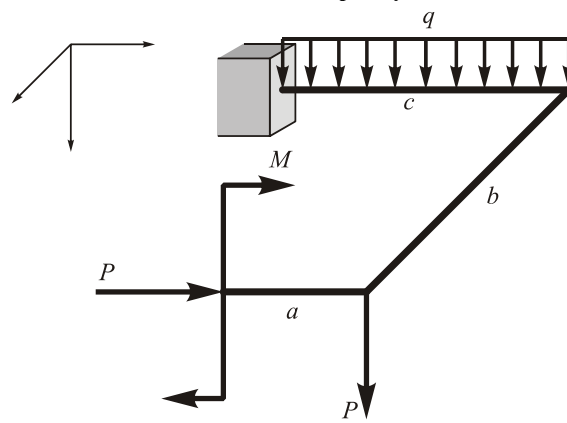
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 34

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
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 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

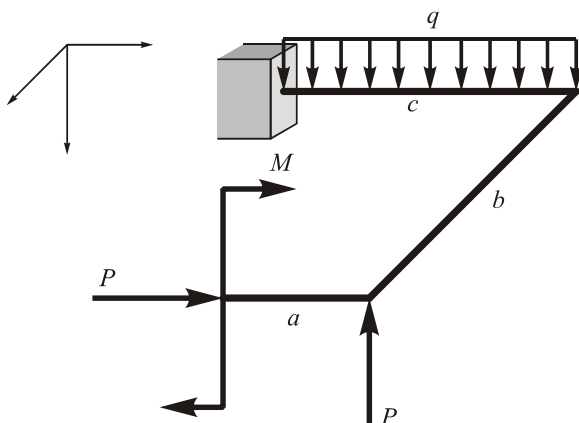
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 35

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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Full name of the lecturer

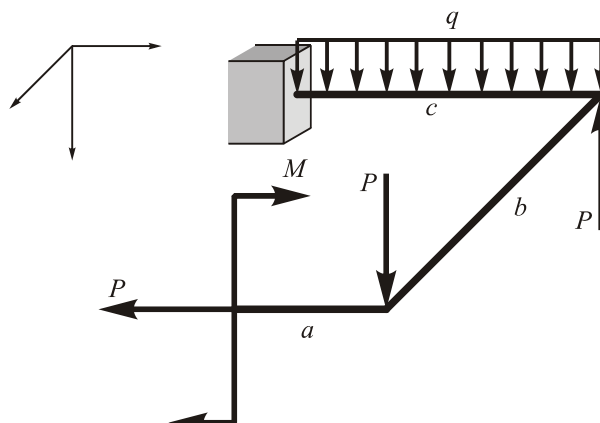
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 36

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

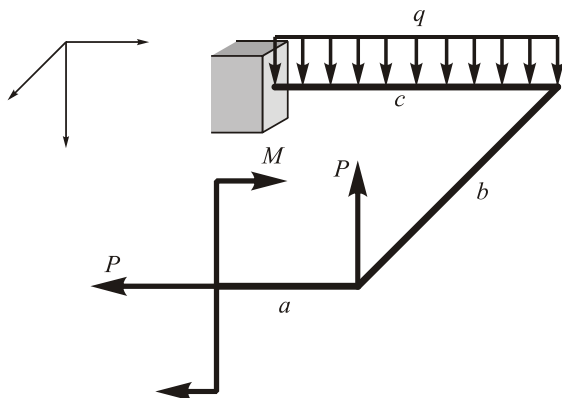
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 37

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

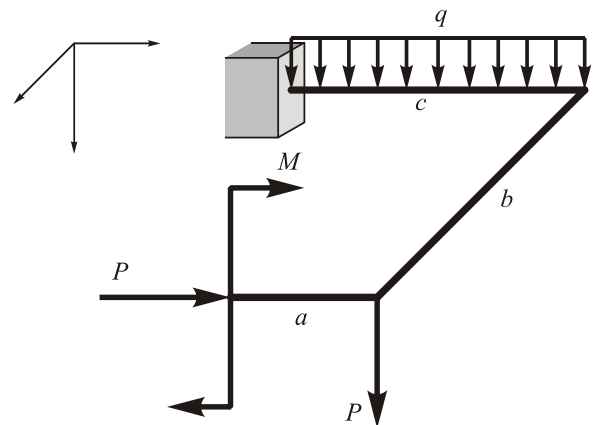
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 38

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

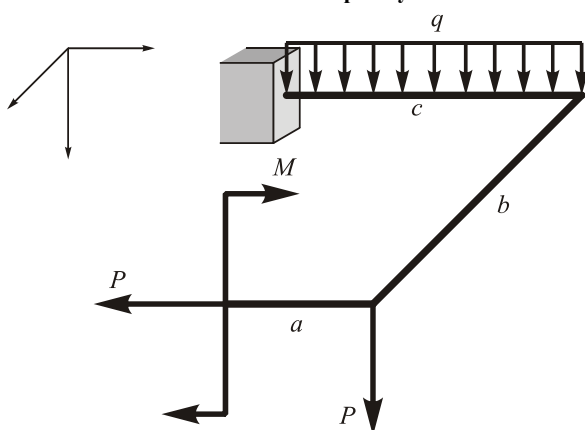
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 39

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

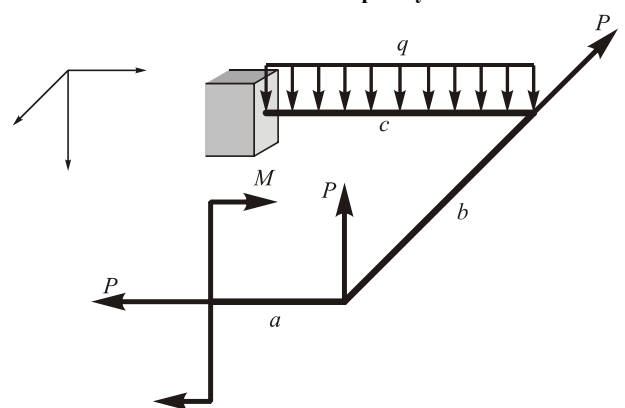
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 40

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

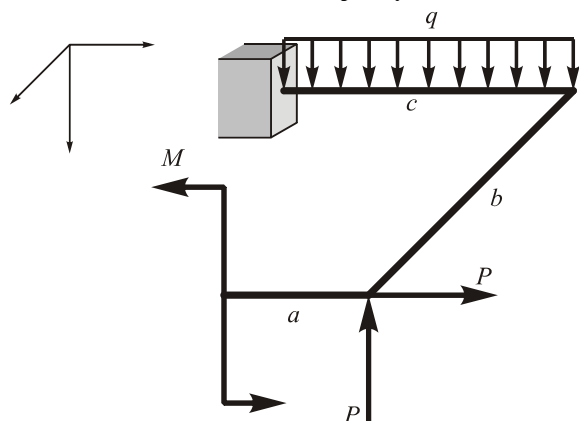
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 41

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

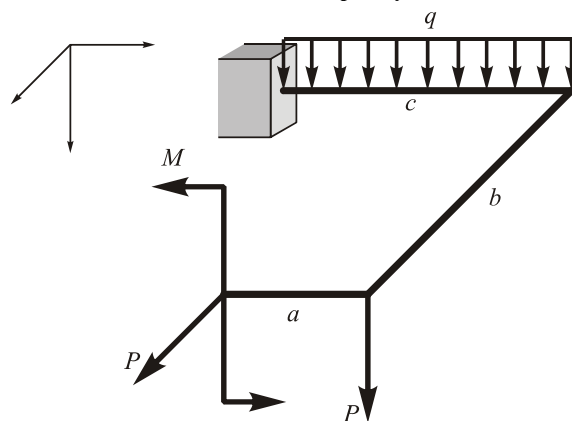
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 42

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

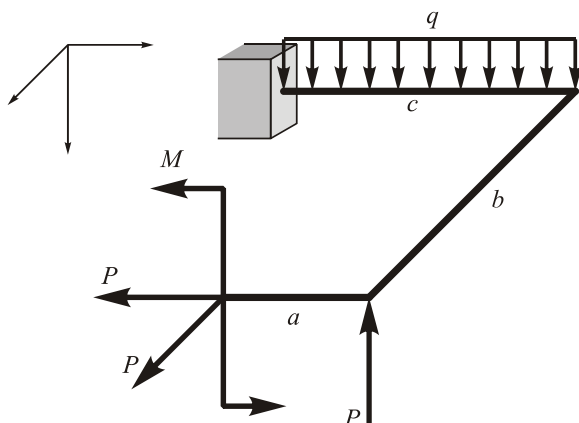
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 43

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

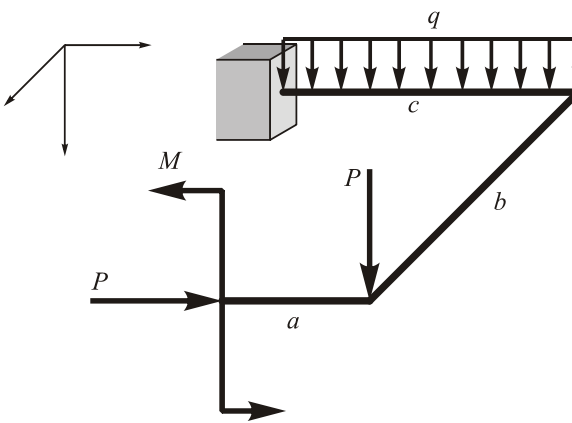
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 44

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

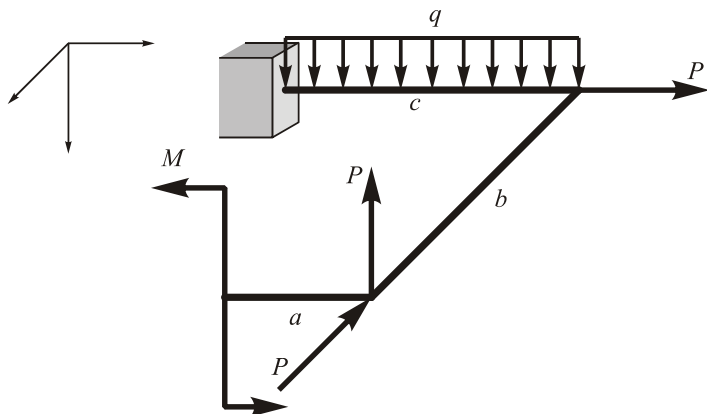
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 45

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

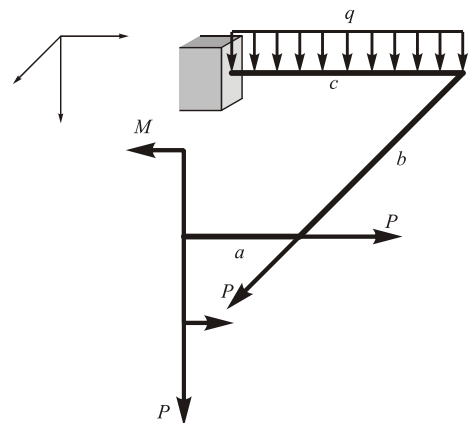
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 46

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

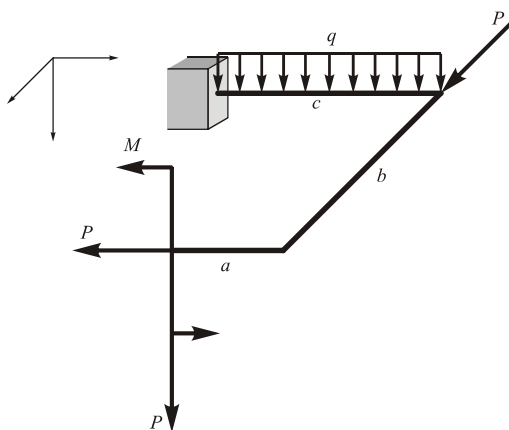
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 47

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

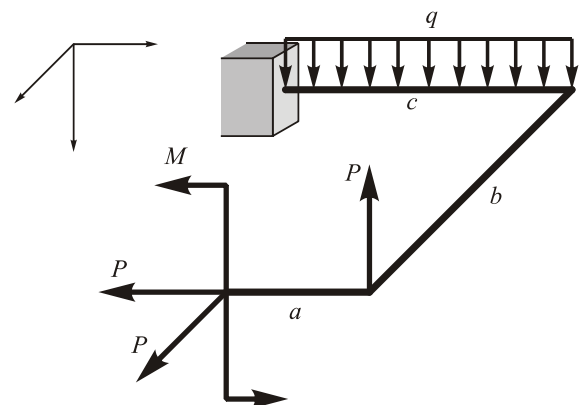
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 48

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

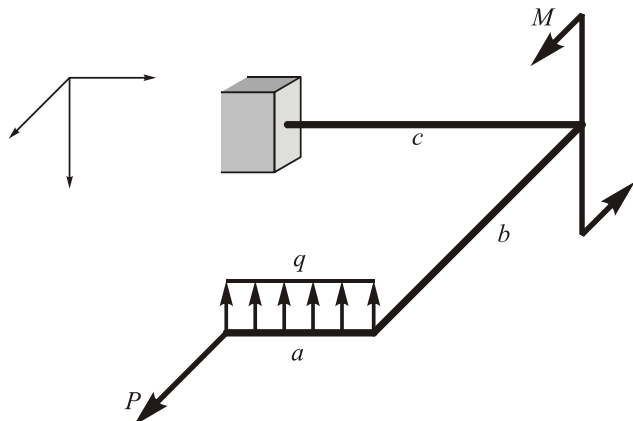
Full name of the lecturer

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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 49 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

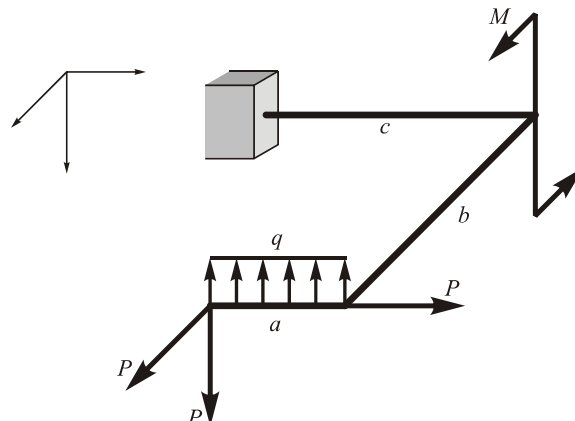
Full name of the lecturer

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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 50 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

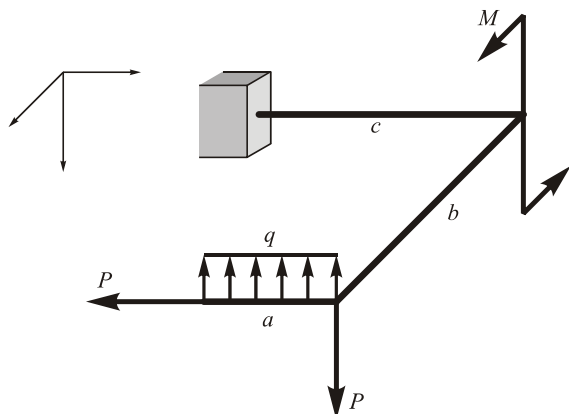
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 51 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

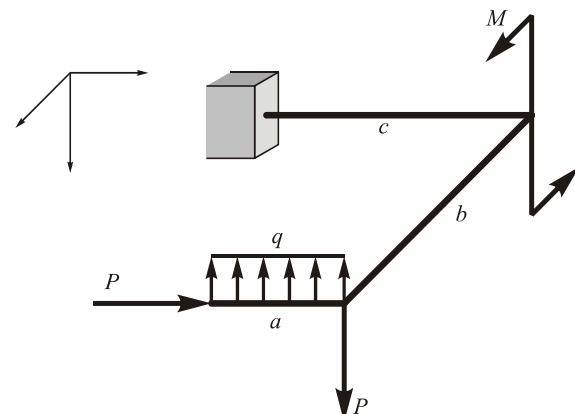
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 52 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

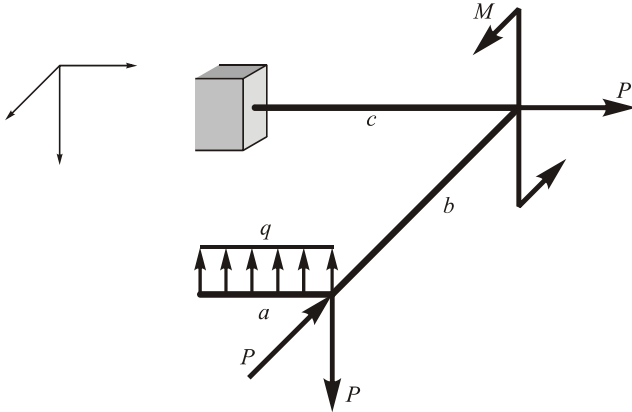
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 53

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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Full name of the lecturer

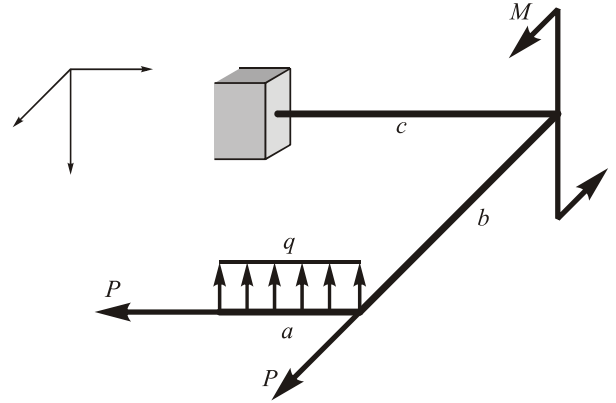
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 54

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

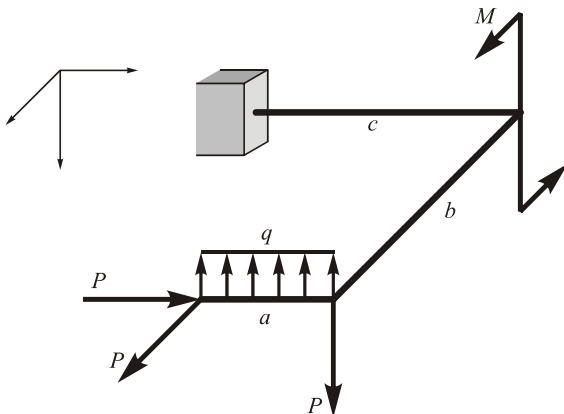
signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 55

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

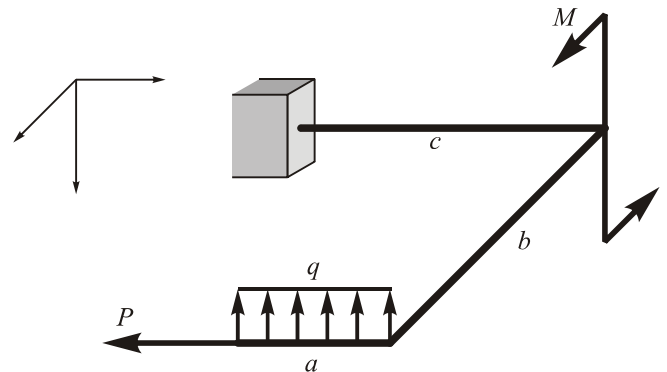
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 56

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

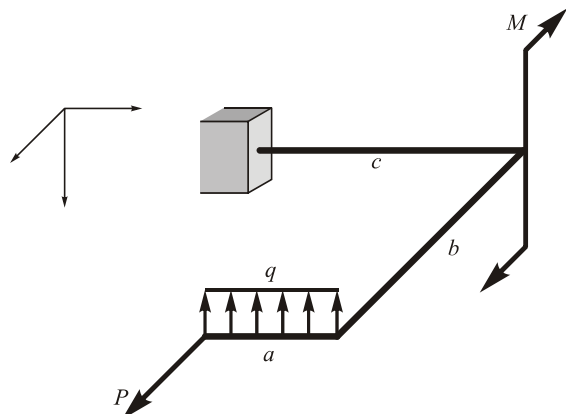
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 57 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

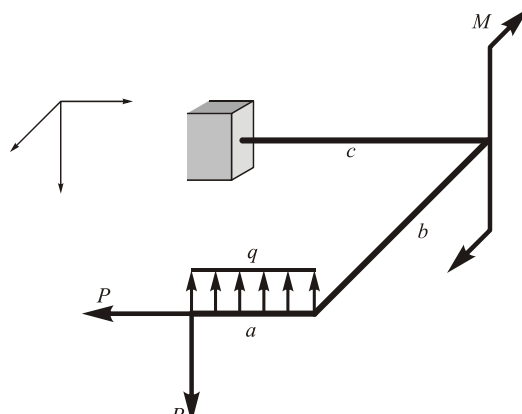
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 58 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

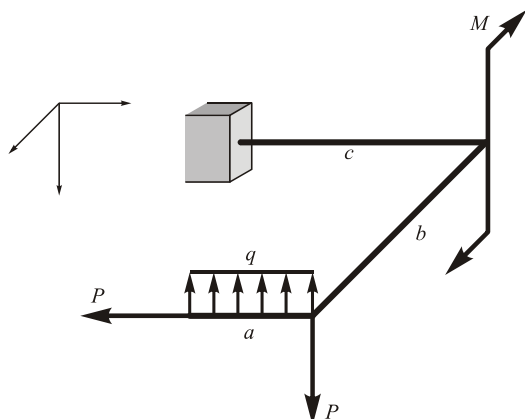
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 59 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

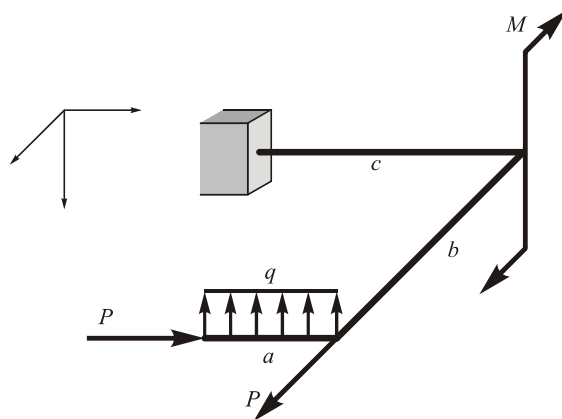
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 60 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

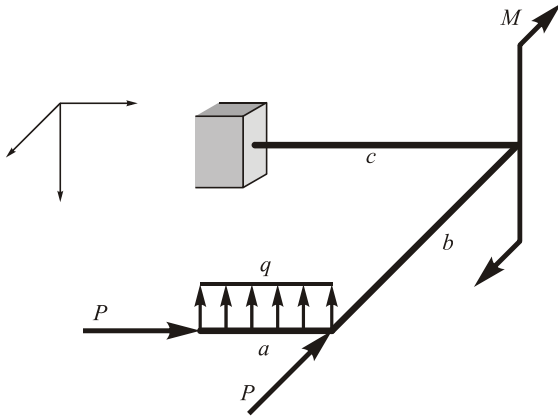
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 61 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

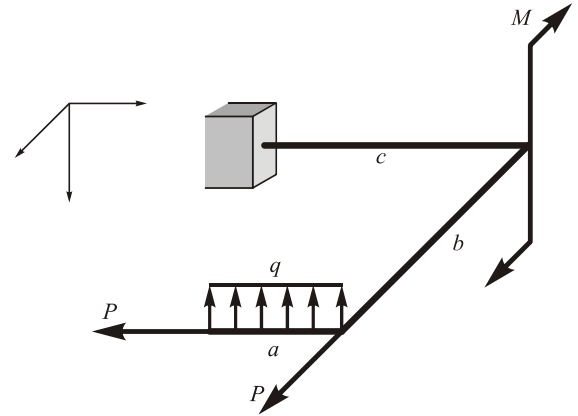
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 62 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

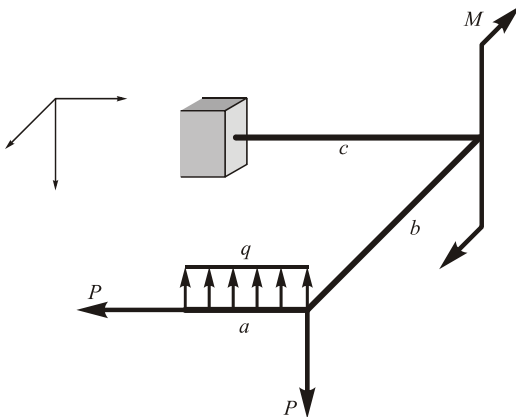
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 63 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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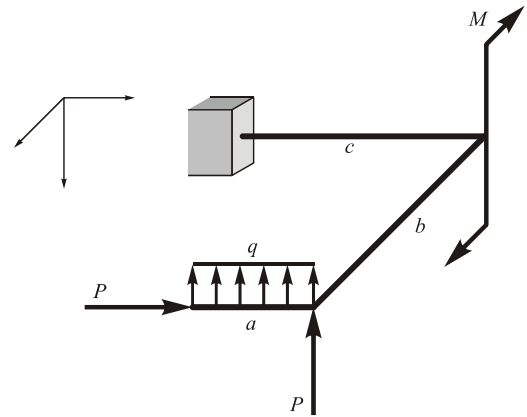
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 64 **Complexity: 1**



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

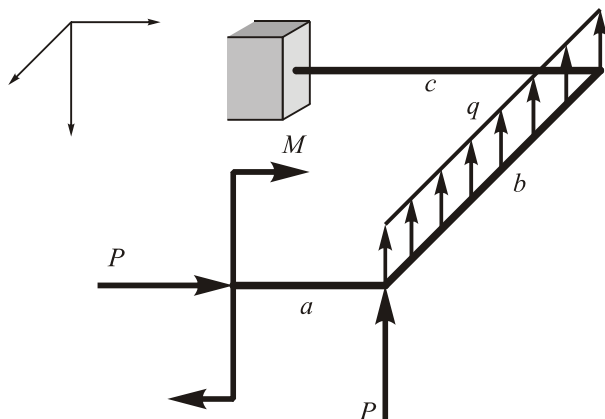
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 65 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

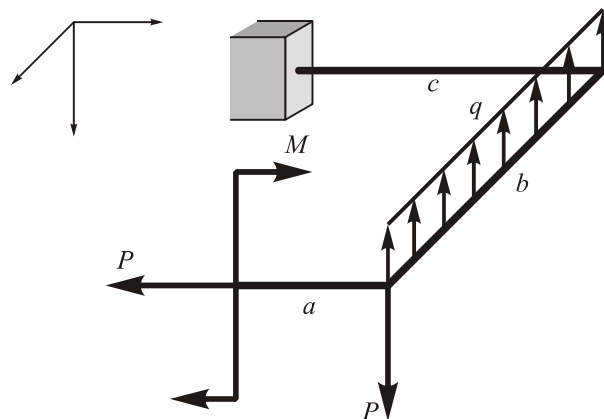
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 66 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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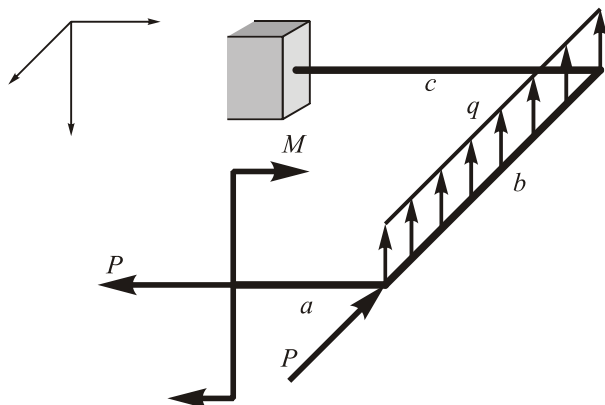
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 67 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

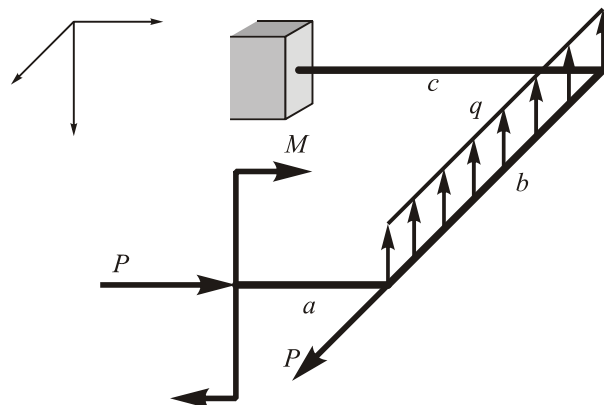
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 68 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

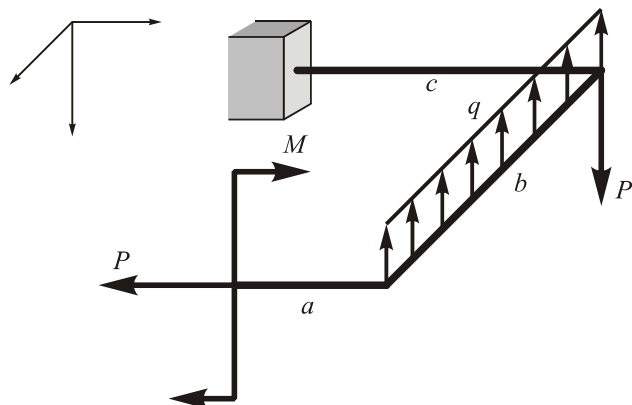
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 69 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

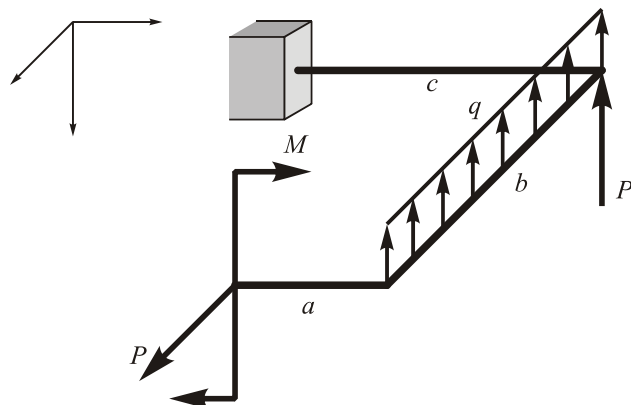
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 70 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

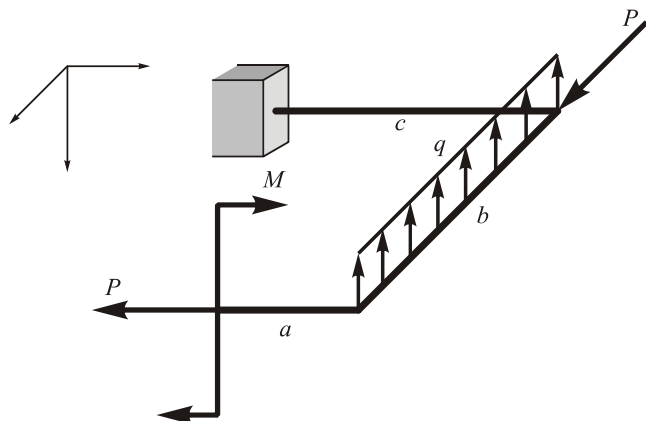
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 71 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

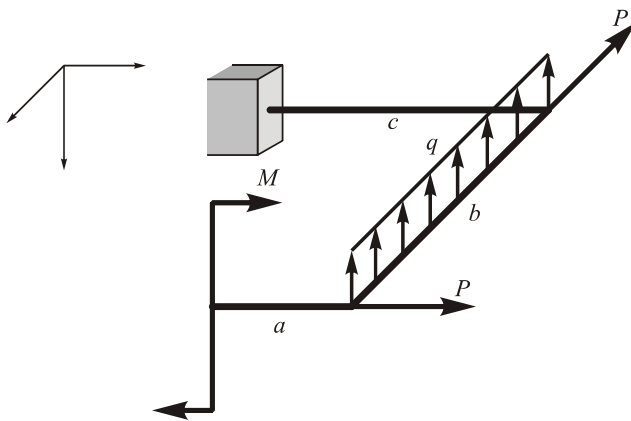
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 72 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

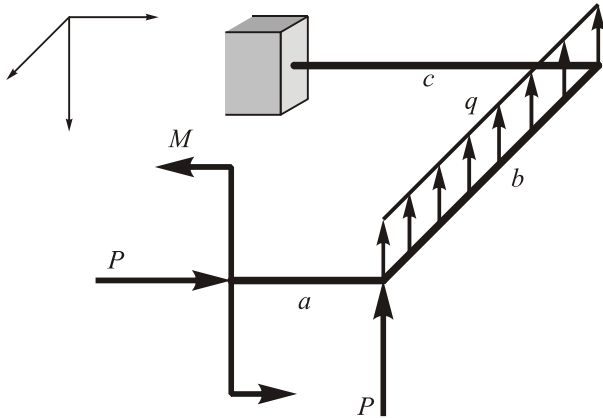
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 73 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

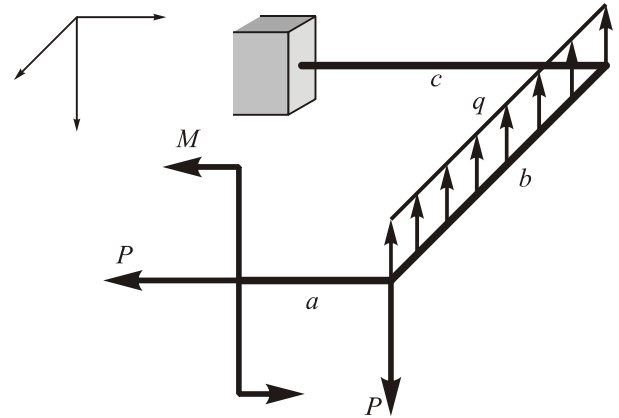
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 74 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

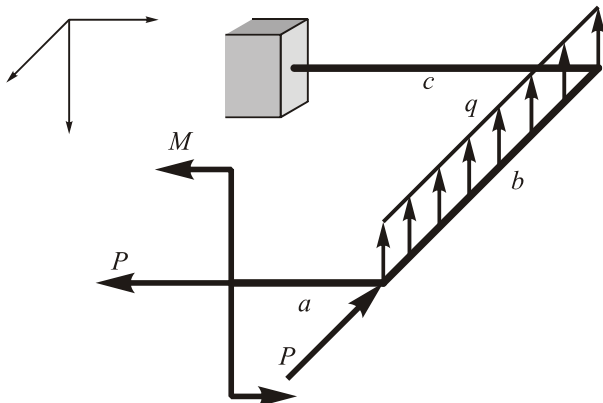
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 75 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

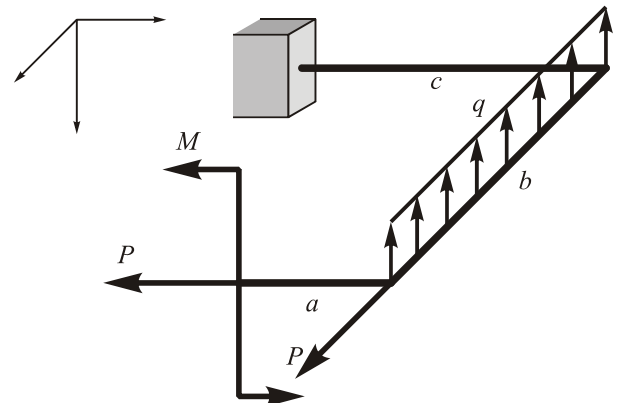
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 76 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

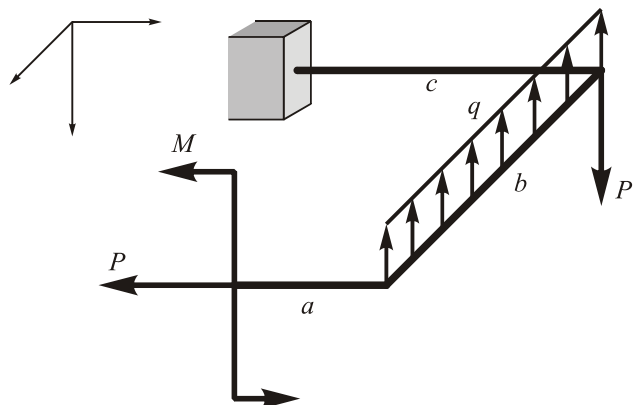
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 77 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

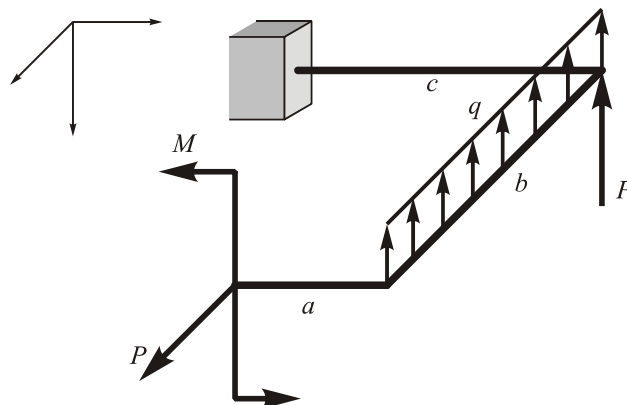
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 78 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

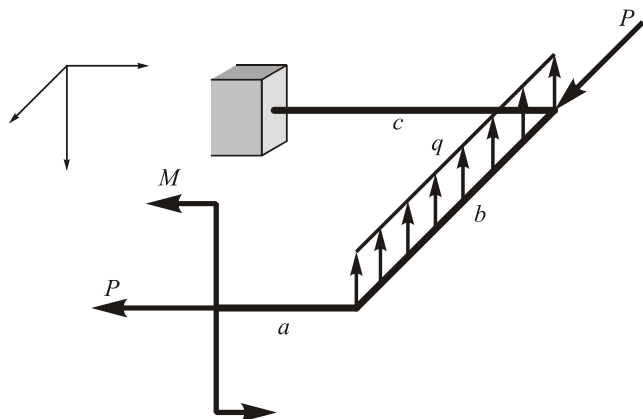
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 79 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

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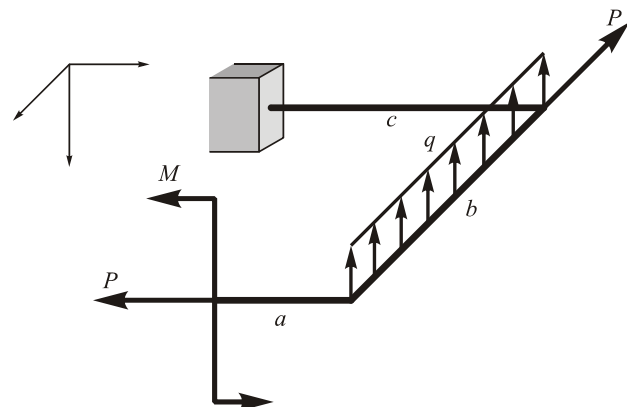
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 80 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
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Full name of the lecturer

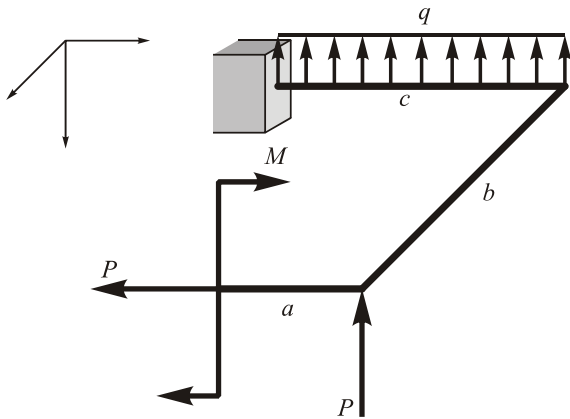
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 81

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

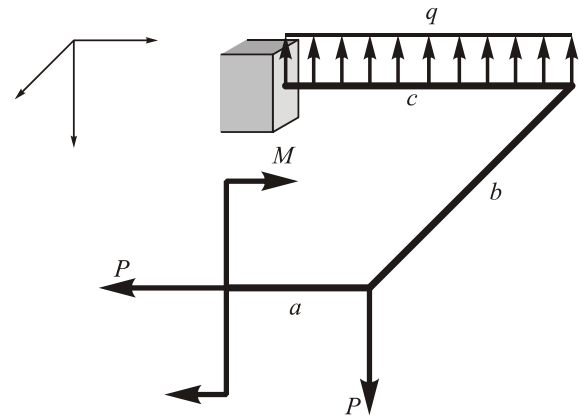
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 82

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

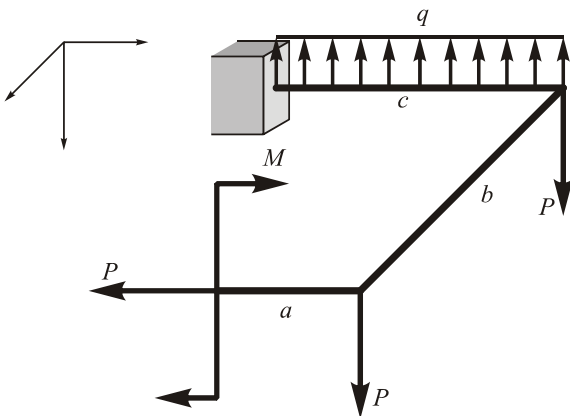
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 83

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

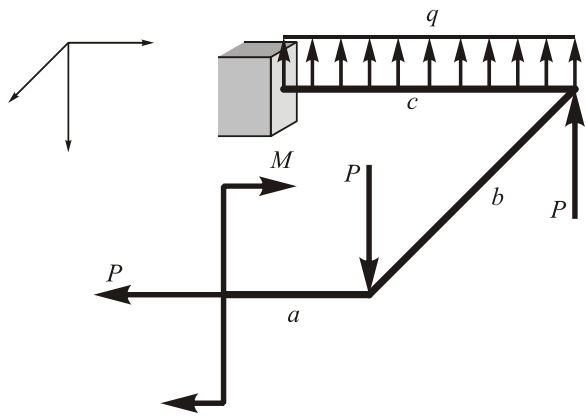
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 84

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

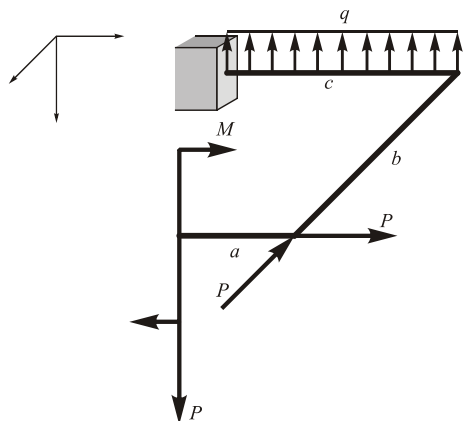
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 85

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

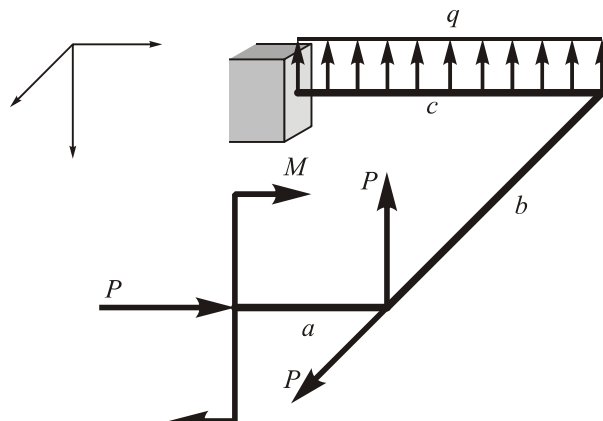
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 86

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

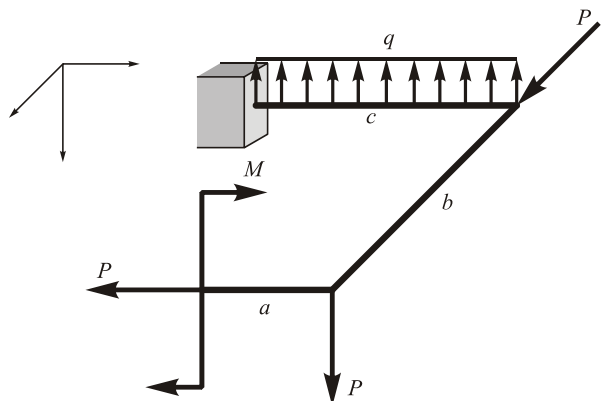
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 87

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

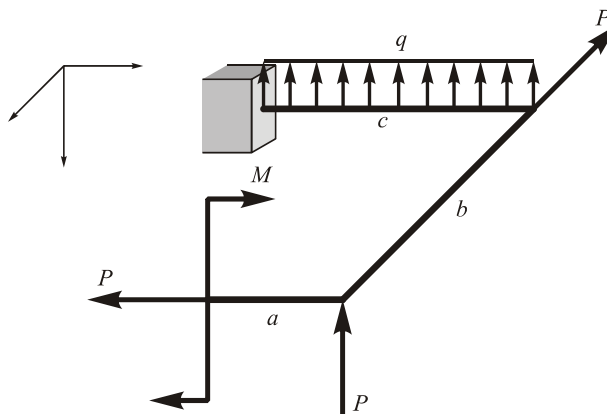
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 88

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

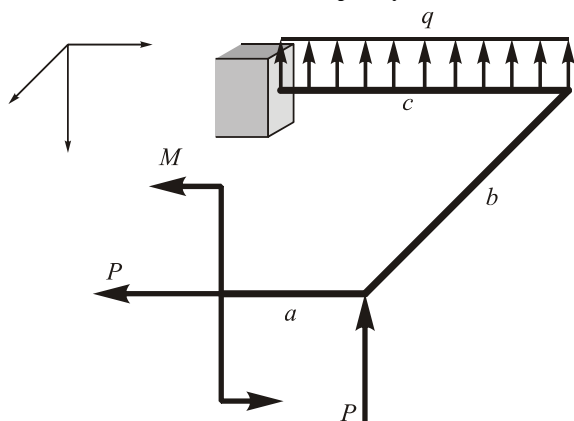
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 89

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
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2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

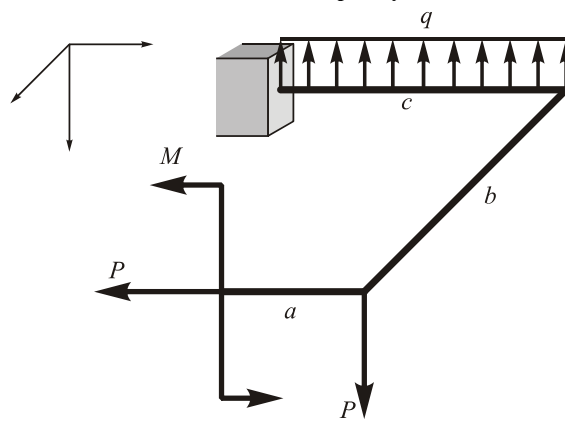
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 90

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

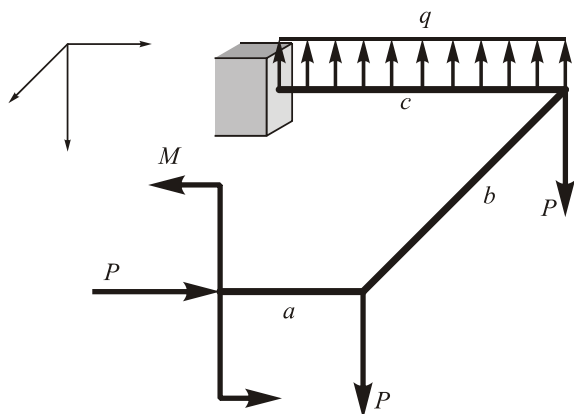
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 91

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

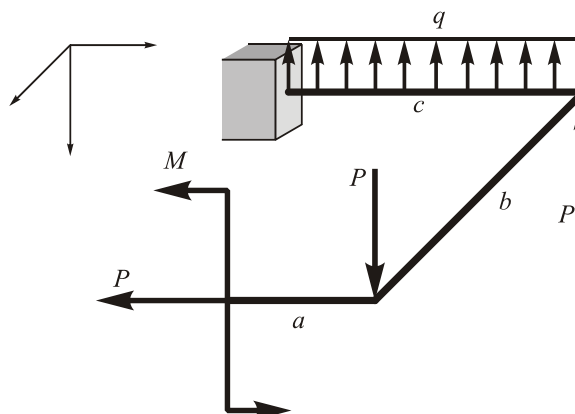
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 92

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

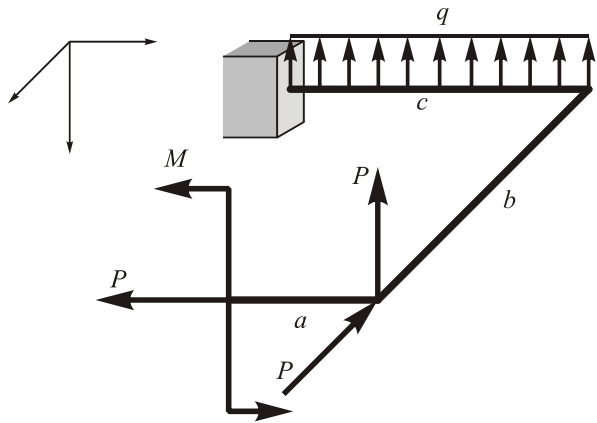
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 93

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

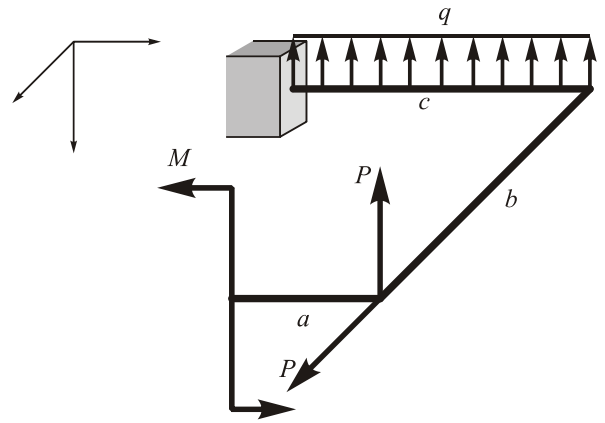
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 94

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

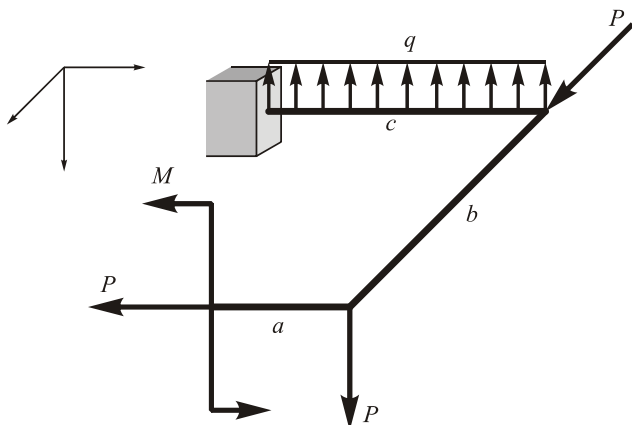
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 95

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

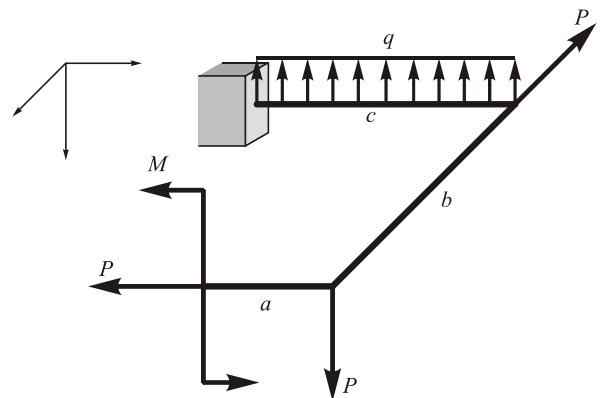
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 96

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

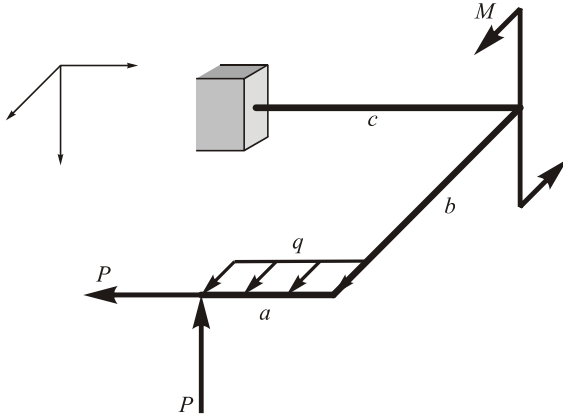
Full name of the lecturer

signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 97 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

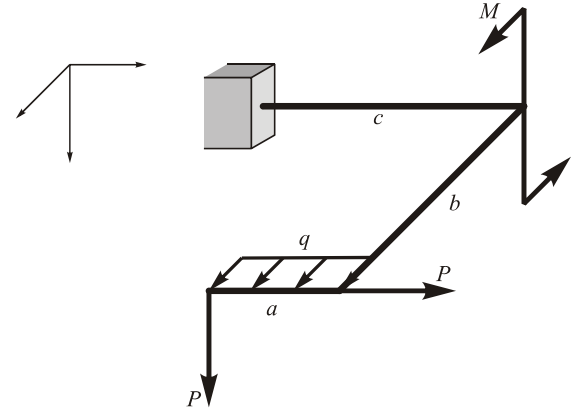
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 98 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

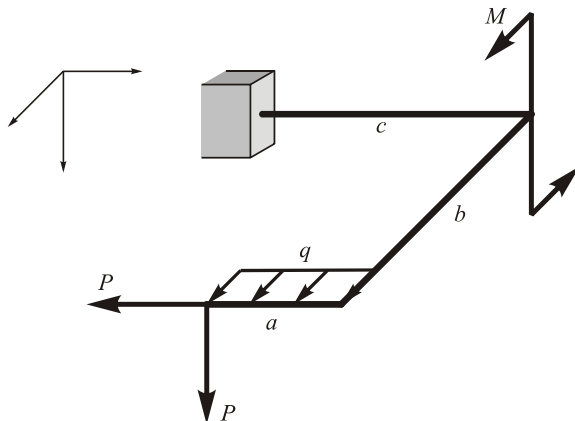
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 99 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

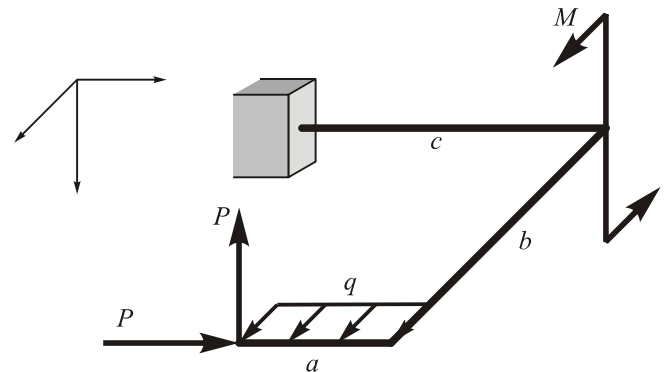
- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer signature

Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 100 Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

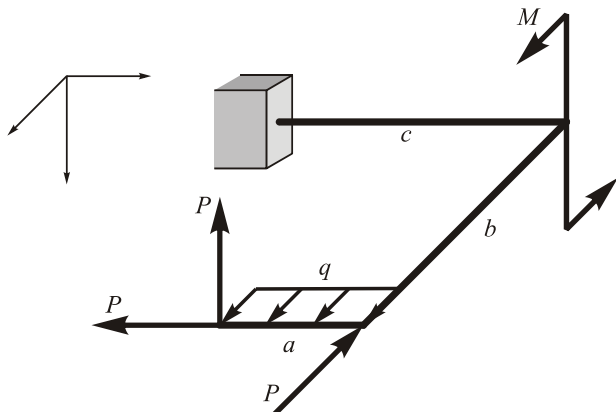
Full name of the lecturer signature

Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 101

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

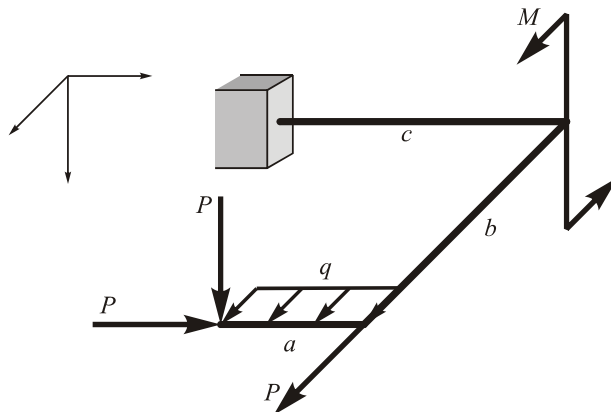
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 102

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

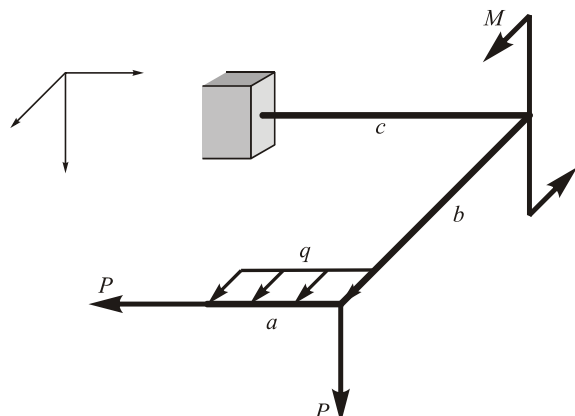
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 103

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

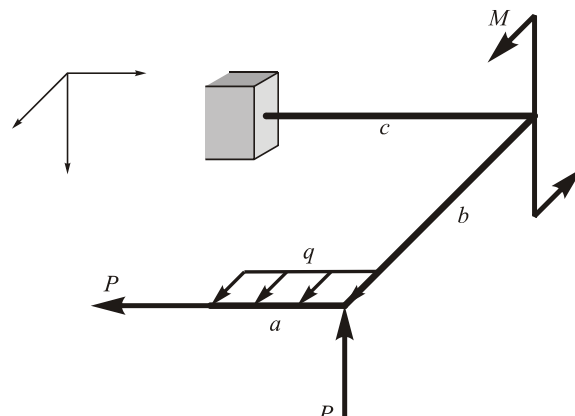
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 104

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

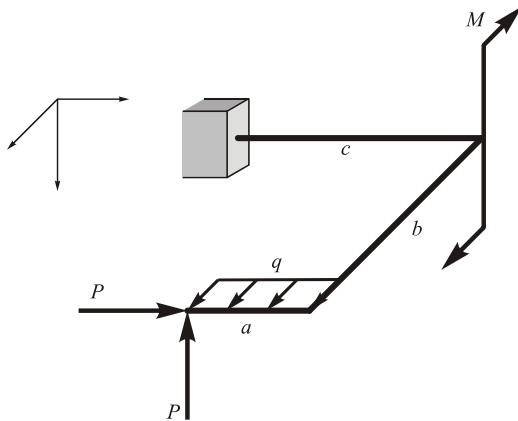
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 105

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

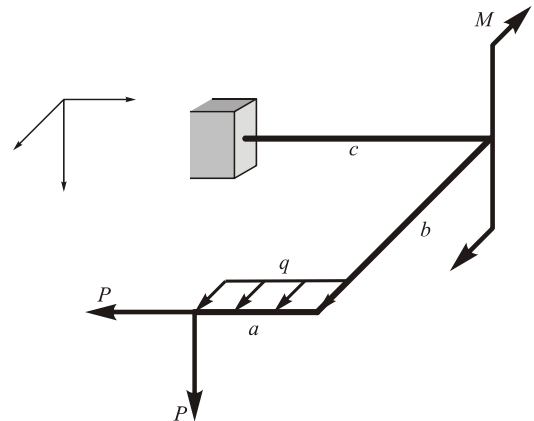
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 106

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

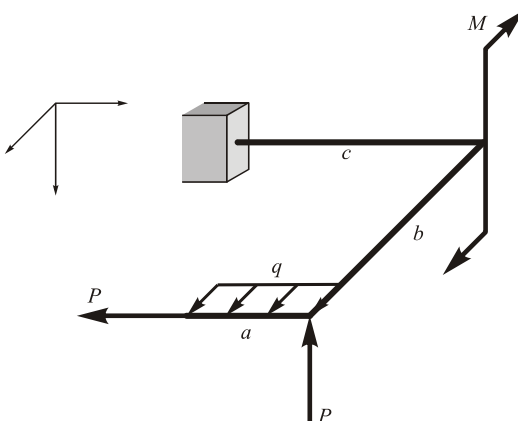
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 107

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

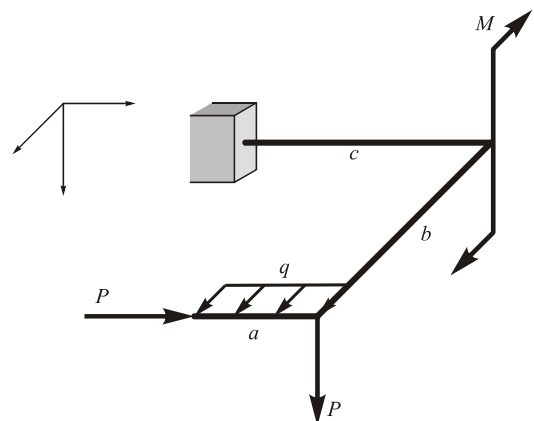
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 108

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

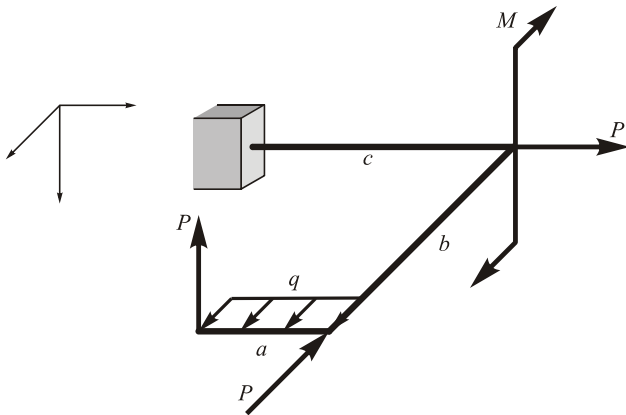
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 109

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

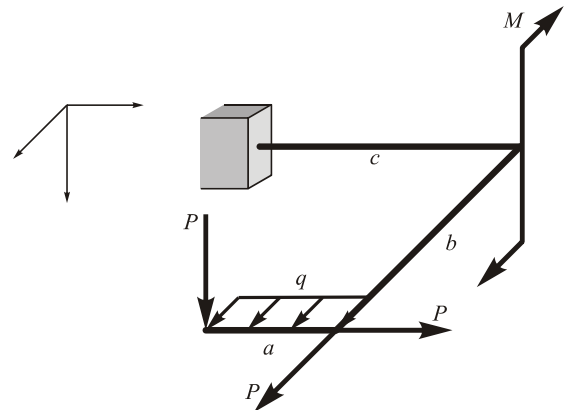
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 110

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

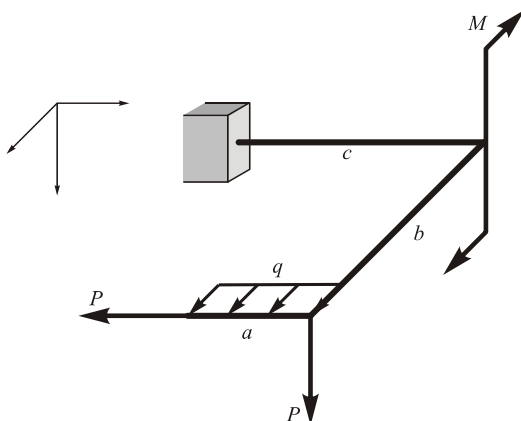
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 111

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
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Full name of the lecturer

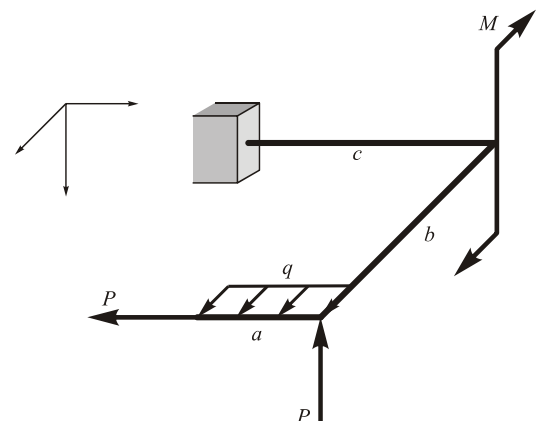
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 112

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

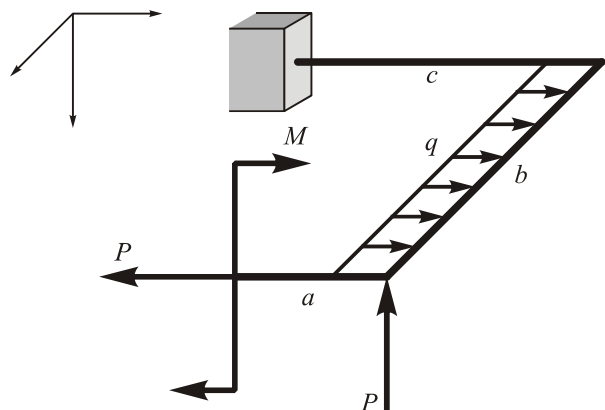
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 113

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

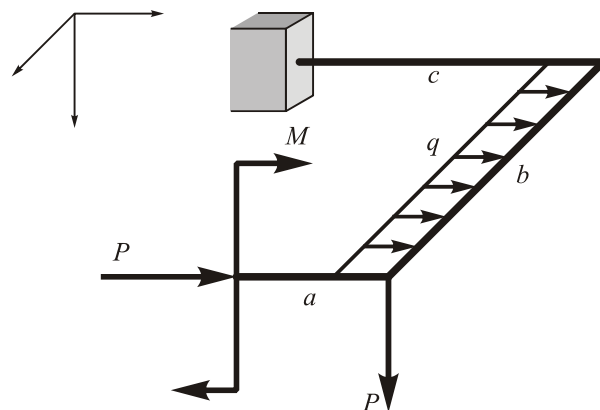
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 114

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

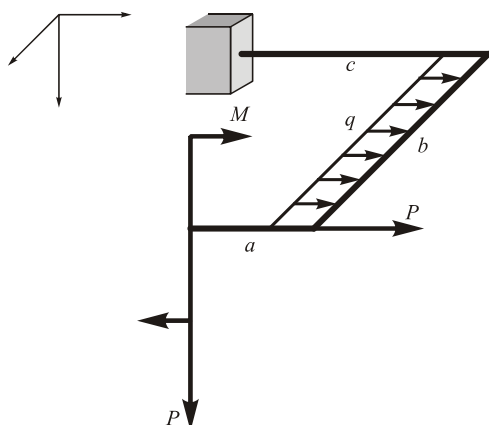
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 115

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

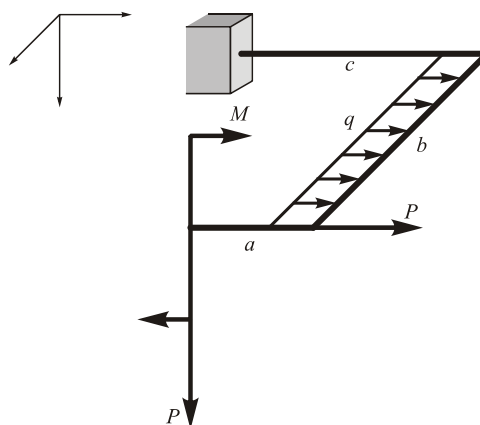
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 116

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

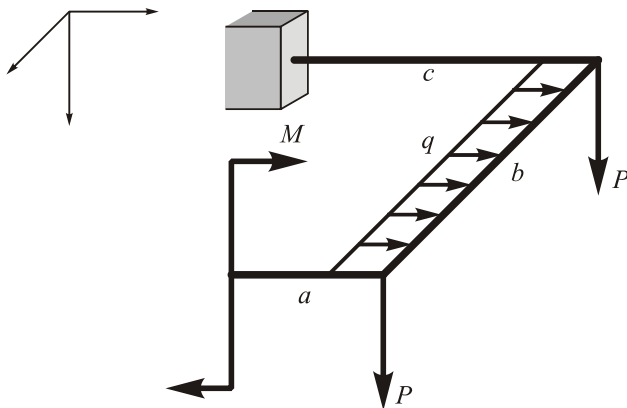
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 117

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

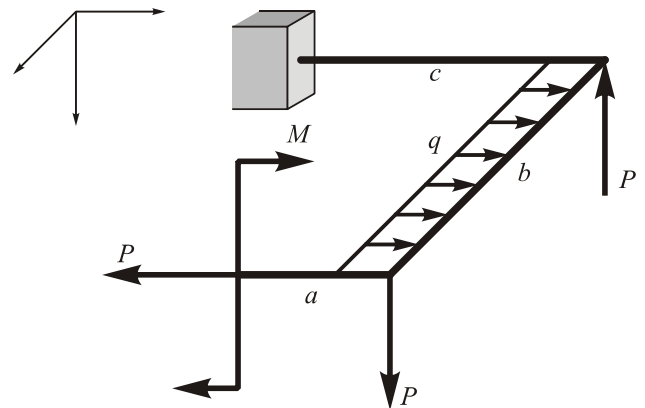
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 118

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

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2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

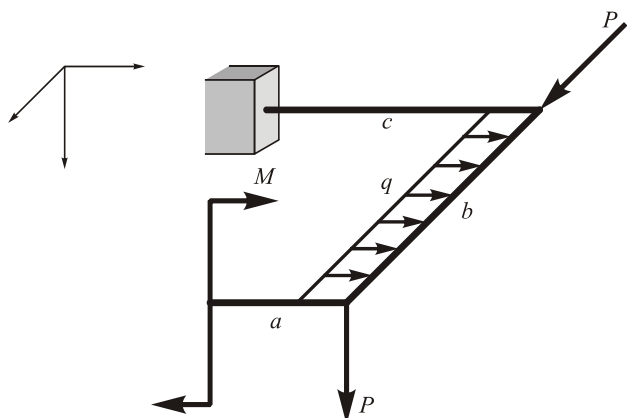
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 119

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

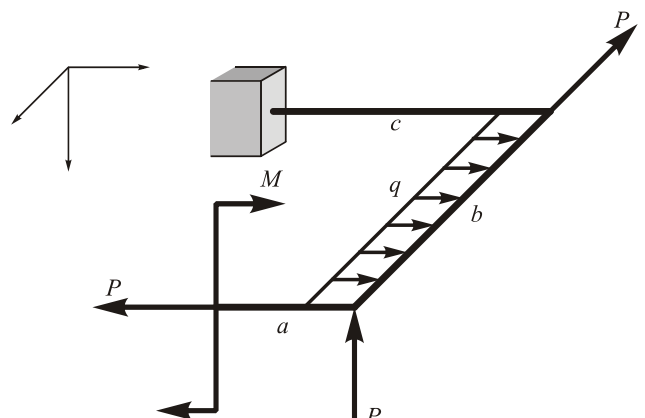
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 120

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

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Full name of the lecturer

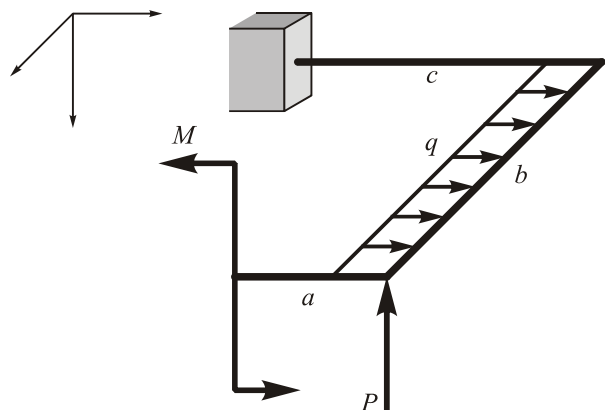
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 121

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

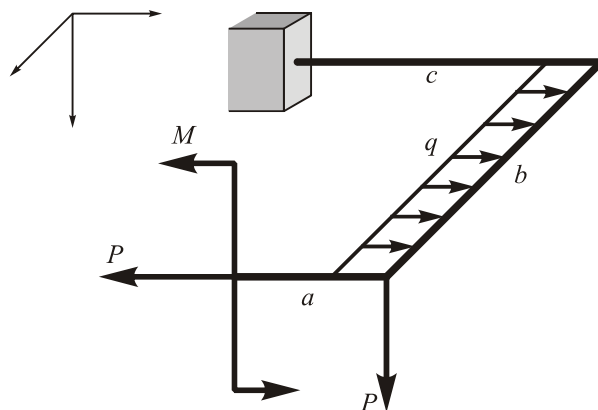
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 122

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Goal:
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Full name of the lecturer

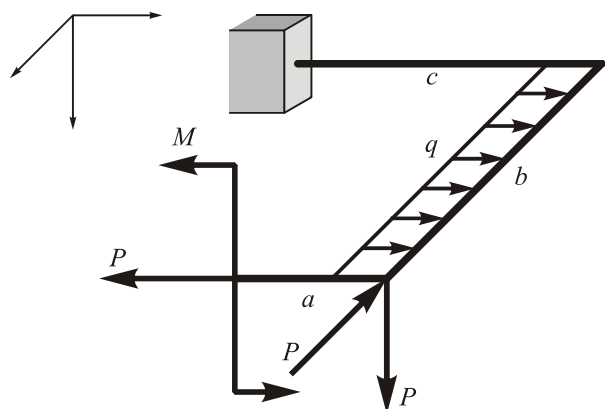
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 123

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

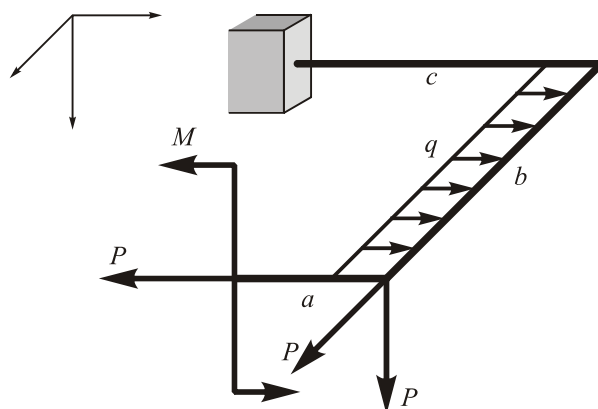
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 124

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

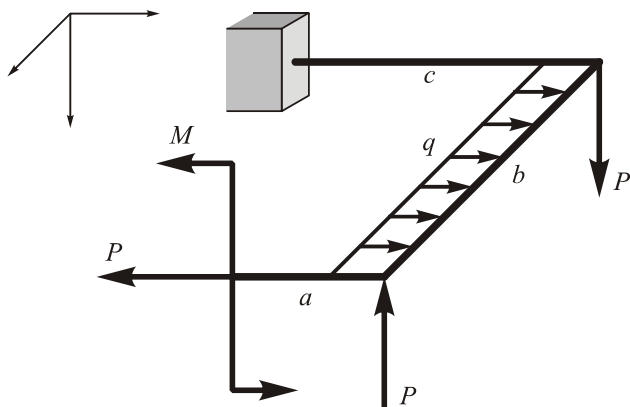
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 125

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

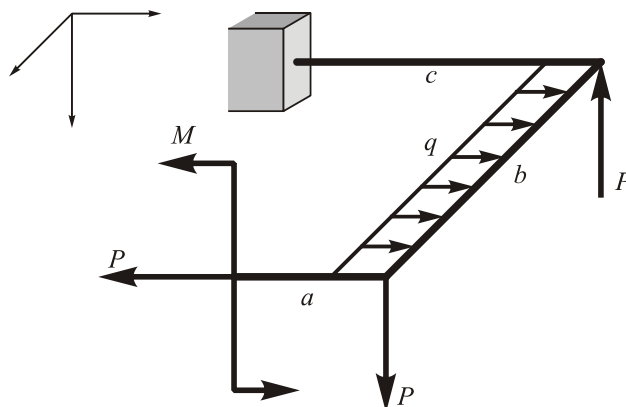
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 126

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

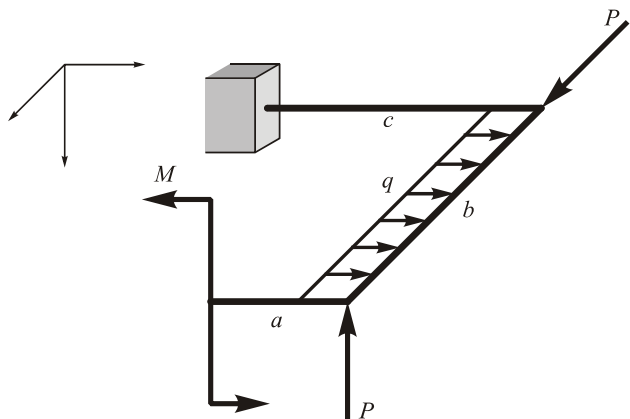
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 127

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

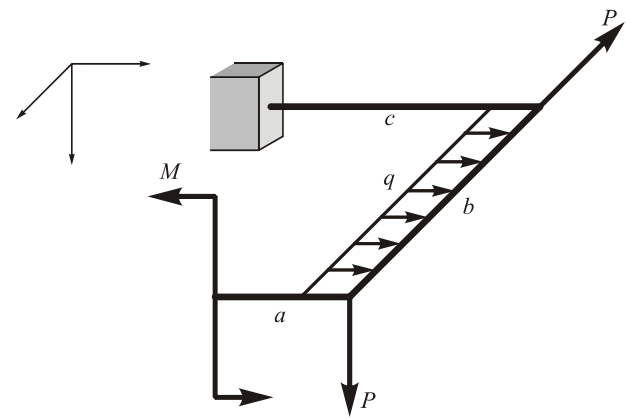
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 128

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

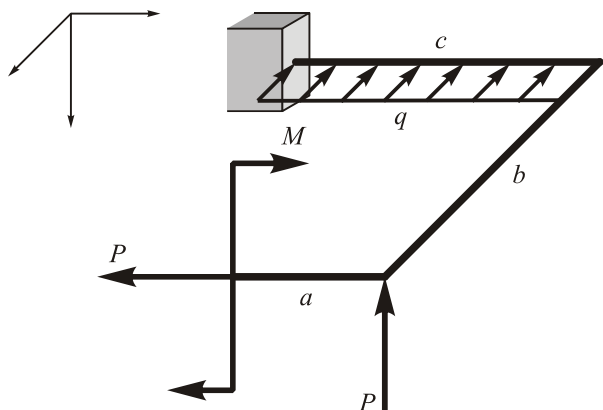
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 129

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

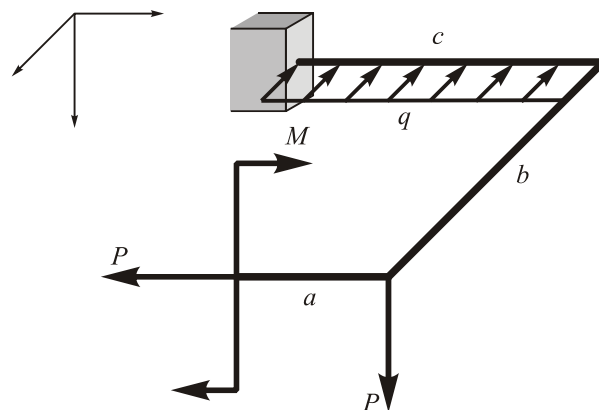
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 130

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

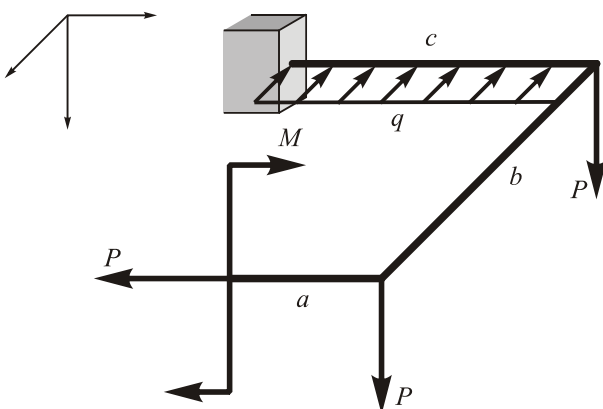
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 131

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

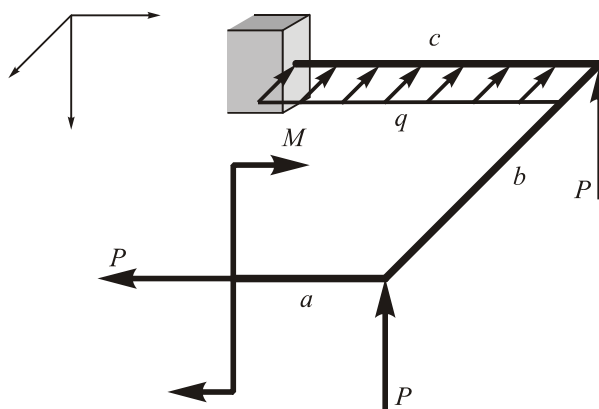
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 132

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

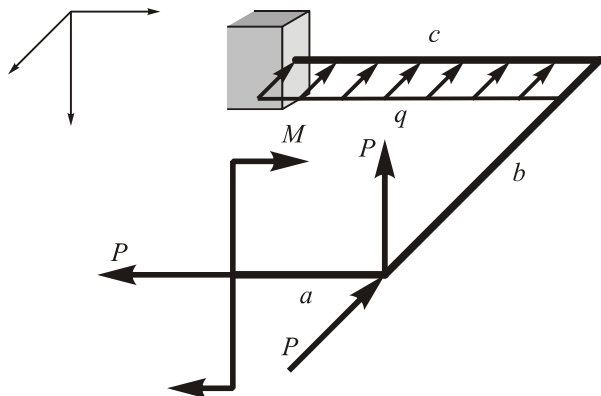
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 133

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

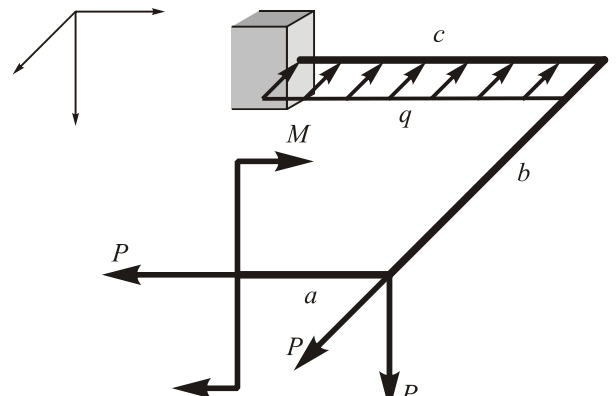
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 134

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

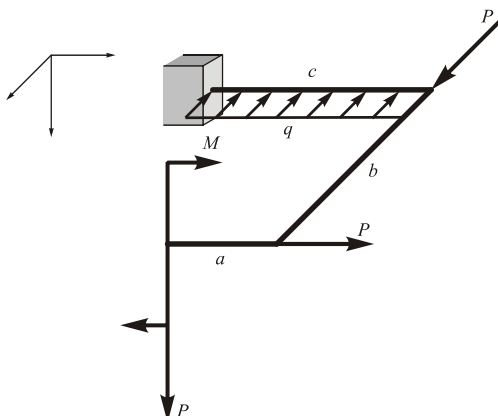
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 135

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

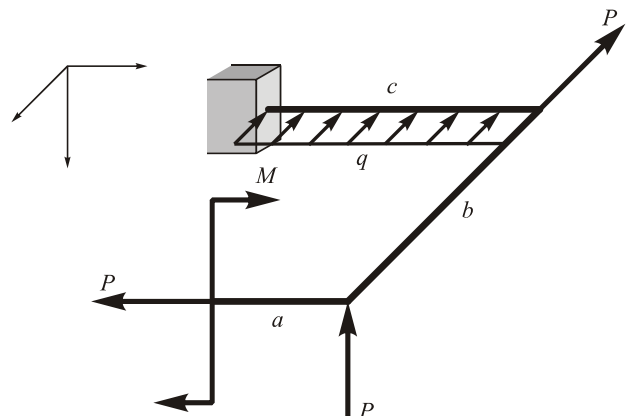
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Mark:

Subject: mechanics of materials
 Document: home problem
 Topic: Stress Analysis of the Rod System in Combined Loading.
 Full name of the student, group

Variant: 136

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
- 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

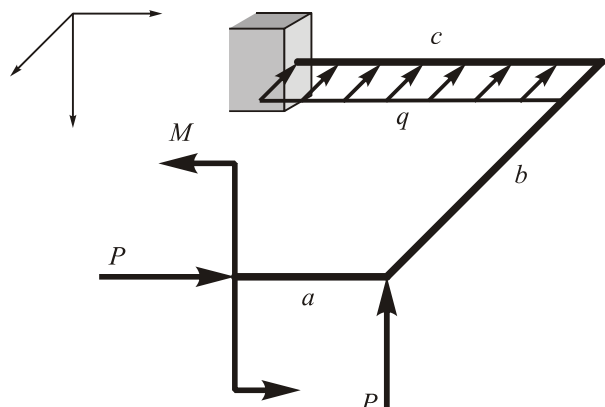
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 137

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

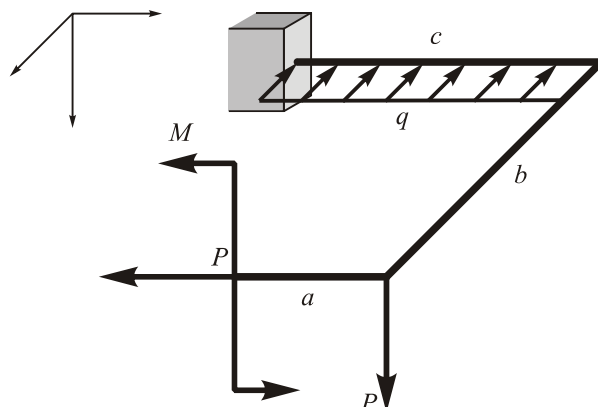
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 138

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

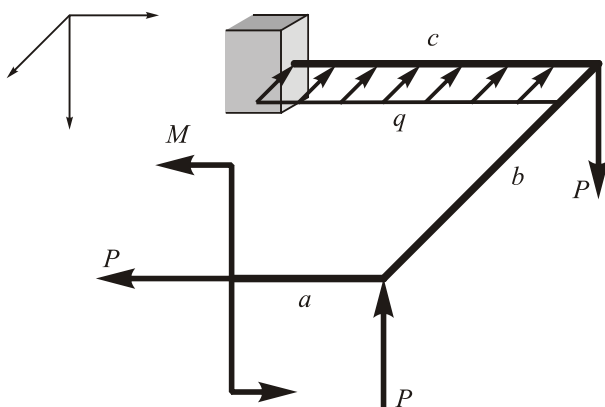
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 139

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

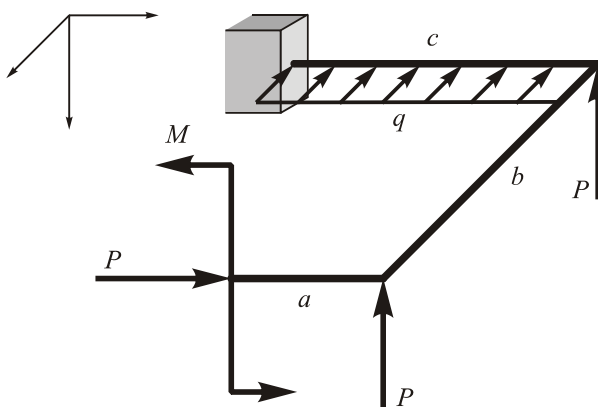
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 140

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:
 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

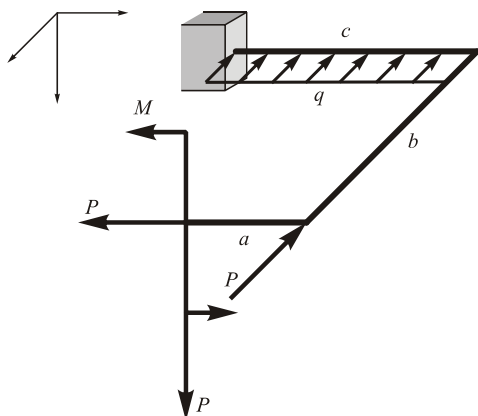
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 141

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

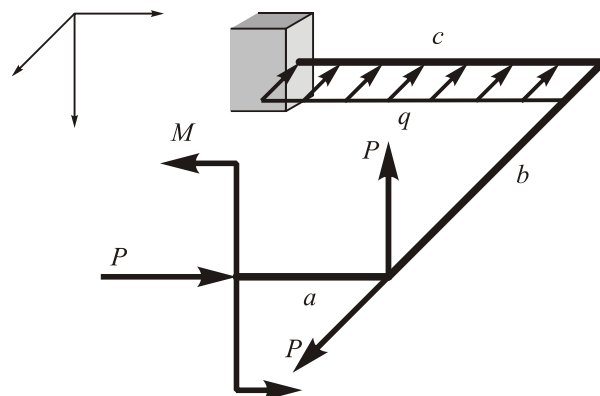
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 142

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
 - 2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

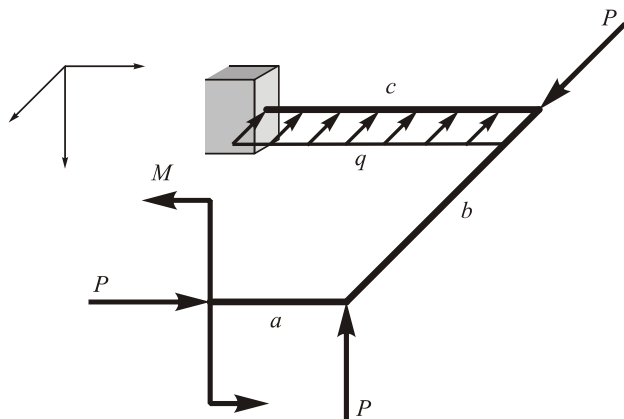
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 143

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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Full name of the lecturer

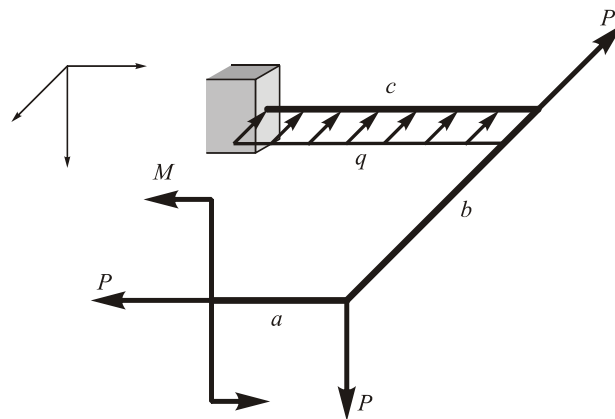
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 144

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

- Goal:**
- 1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;
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Full name of the lecturer

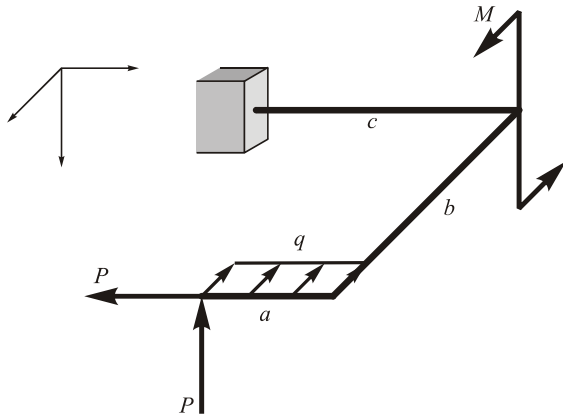
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 145

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

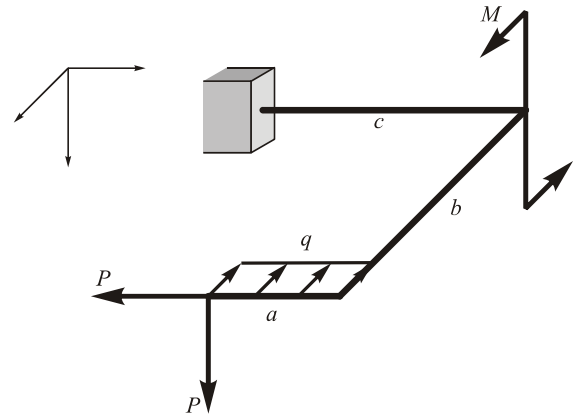
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 146

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

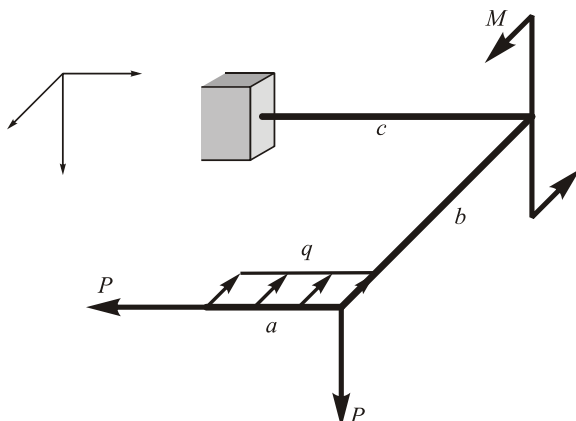
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 147

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
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Full name of the lecturer

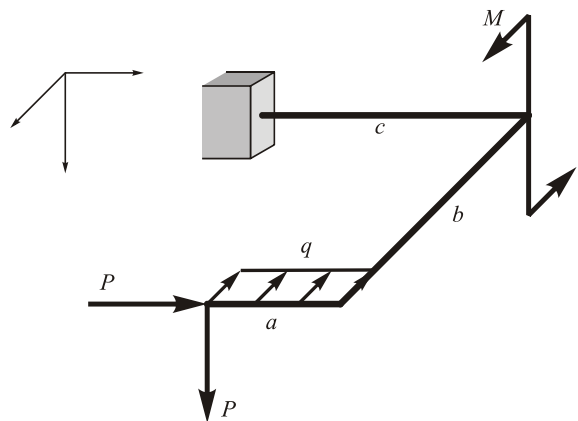
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 148

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

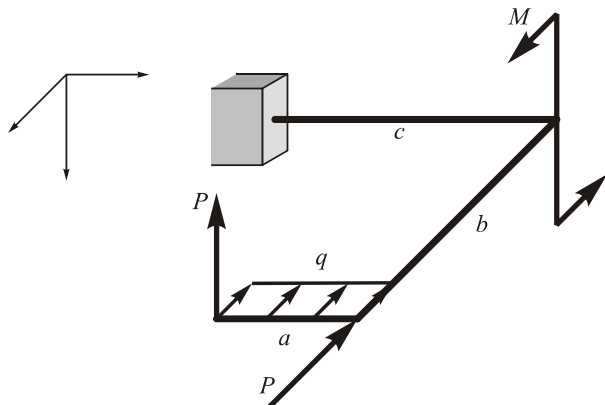
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 149

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

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Full name of the lecturer

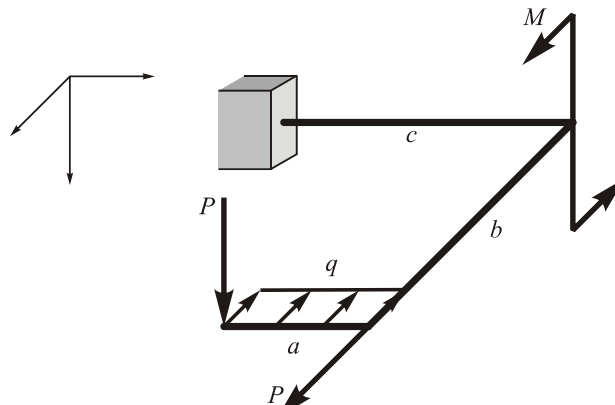
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Mark:

Subject: mechanics of materials
Document: home problem
Topic: Stress Analysis of the Rod System in Combined Loading.
Full name of the student, group

Variant: 150

Complexity: 1



Given: $q = 10 \text{ kN/m}$; $P = 20 \text{ kN}$; $M = 10 \text{ kNm}$; $[\sigma] = 160 \text{ MPa}$; $a = 2 \text{ m}$,
 $b = 3 \text{ m}$; $c = 4 \text{ m}$.

Goal:

1) write the equations of internal forces and moments in an arbitrary cross-sections of the rod system and draw the graphs of their distributions along the length of rod portions;

2) for the last portion: a) calculate the diameter of round solid cross-section; b) dimensions of rectangle solid cross-section in $h/b = 2$.

Full name of the lecturer

signature

Mark: