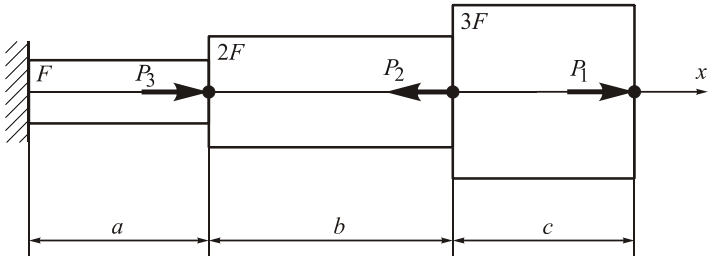
National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 1 **Complexity: 1**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

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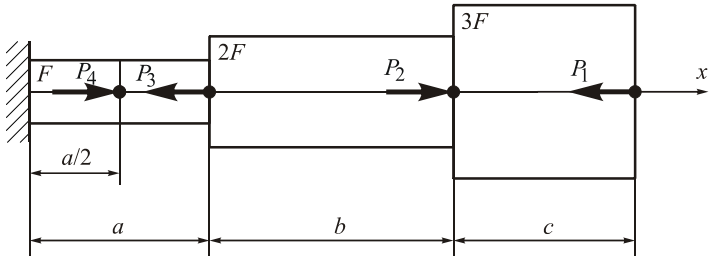
Full name of the student, group

Variant: 2 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

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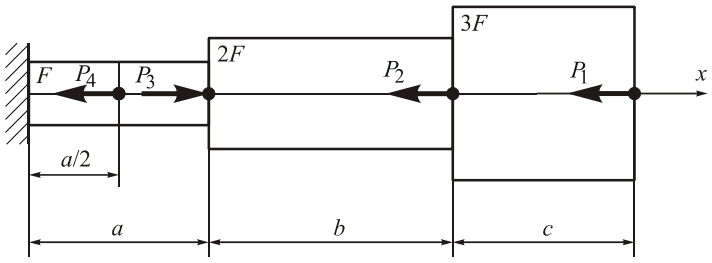
Variant: 3 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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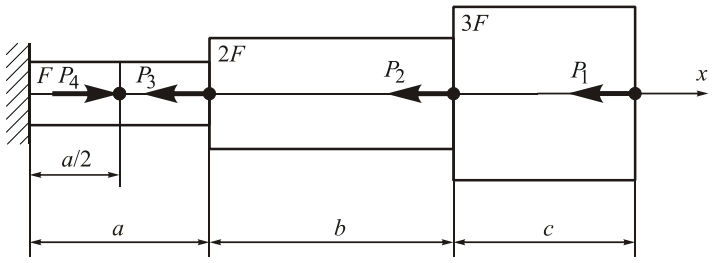
Variant: 4 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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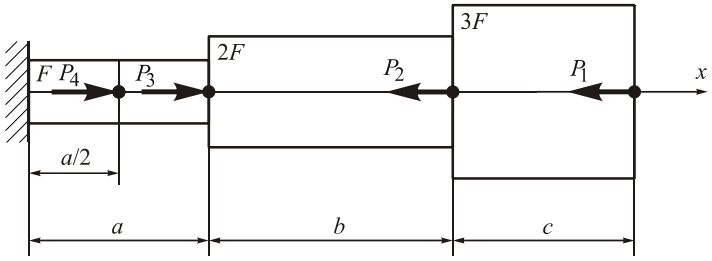
Variant: 5 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
a = 3 m, b = 4 m, c = 5 m.

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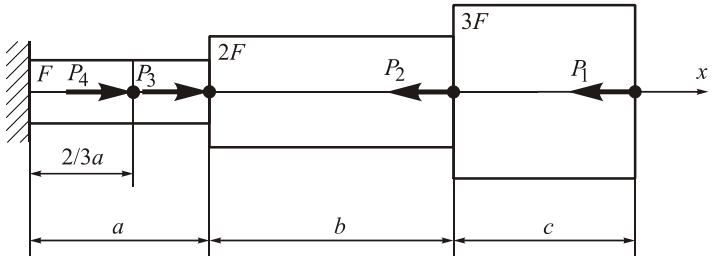
Variant: 6 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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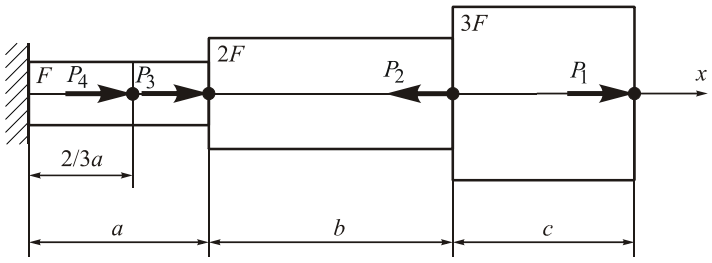
Variant: 7 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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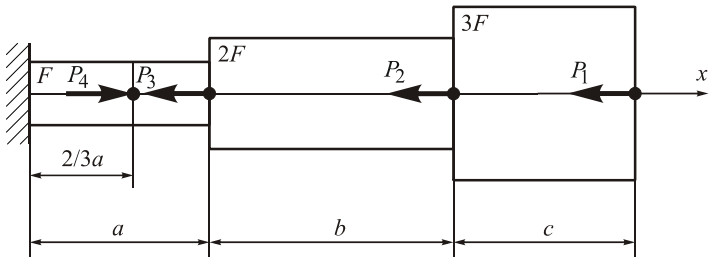
Variant: 8 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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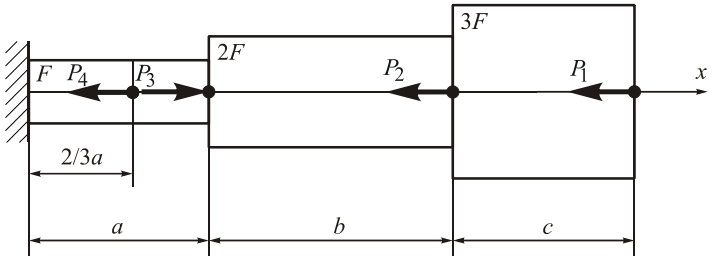
Variant: 9 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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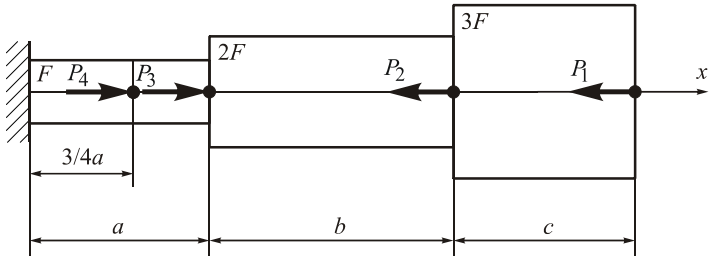
Variant: 10 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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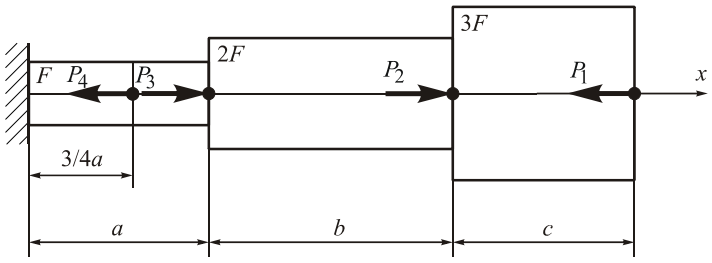
Variant: 11 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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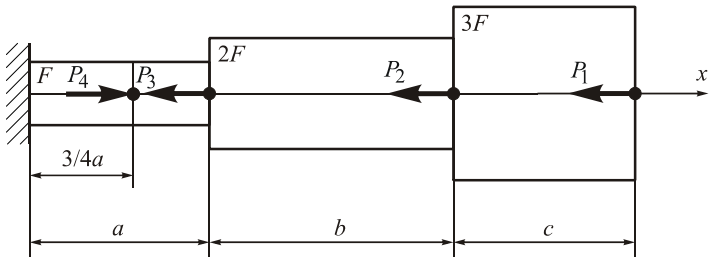
Variant: 12 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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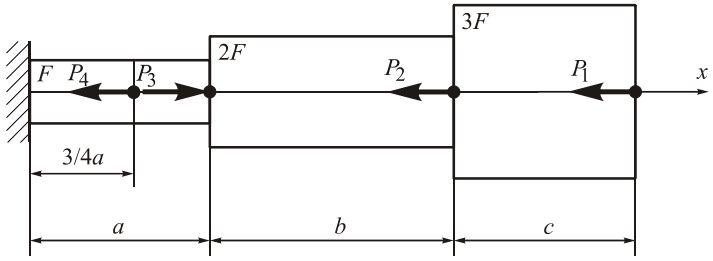
Variant: 13 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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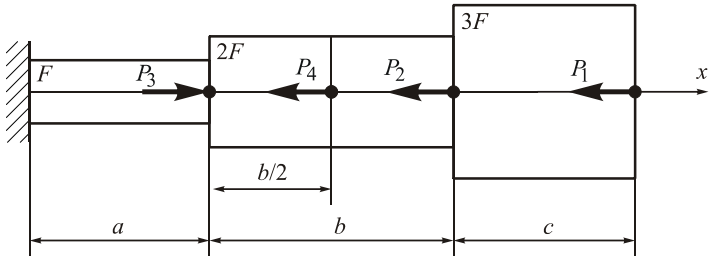
Variant: 14 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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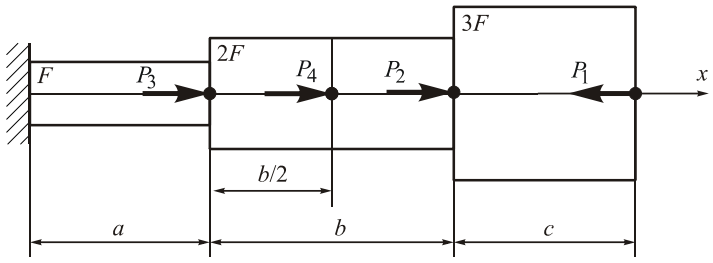
Variant: 15 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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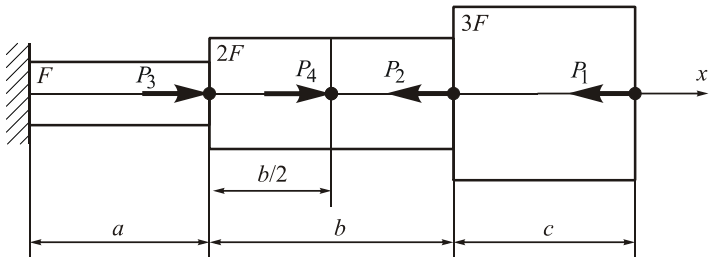
Variant: 16 **Complexity: 2**



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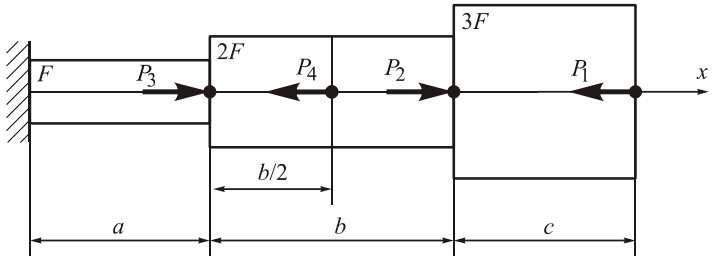
Variant: 17 **Complexity: 2**



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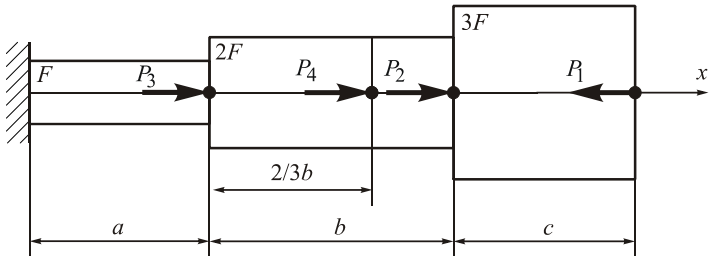
Variant: 18 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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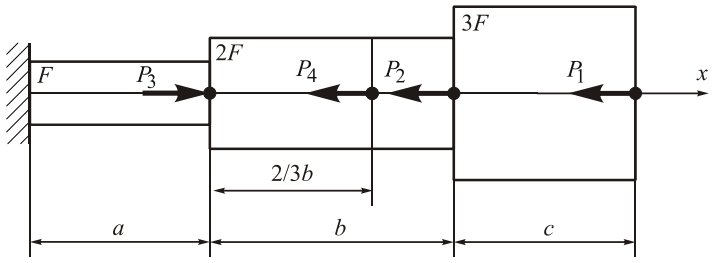
Variant: 19 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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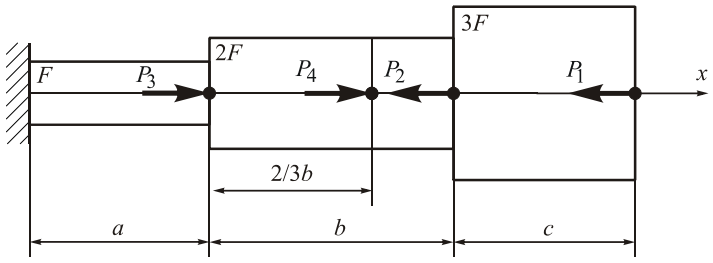
Variant: 20 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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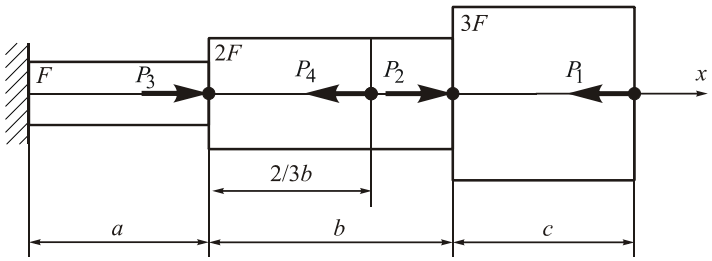
Variant: 21 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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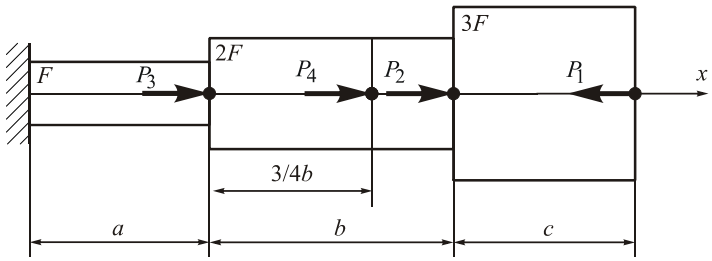
Variant: 22 **Complexity: 2**



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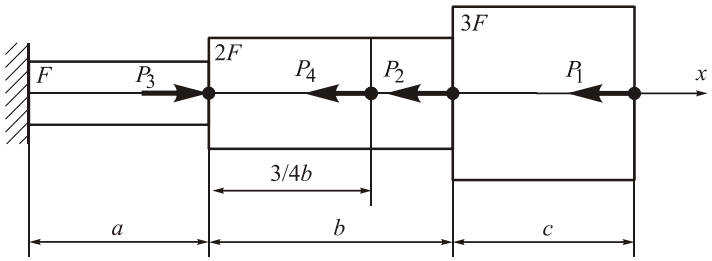
Variant: 23 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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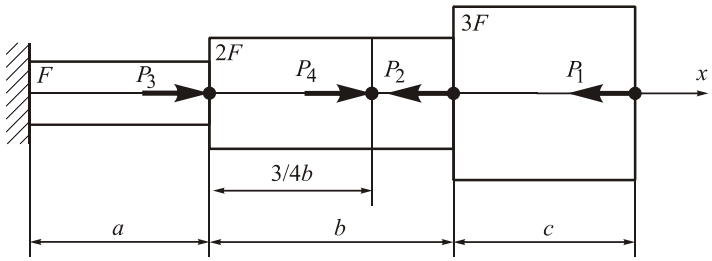
Variant: 24 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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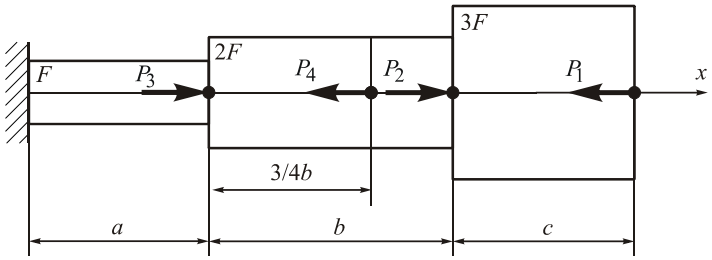
Full name of the student, group

Variant: 25 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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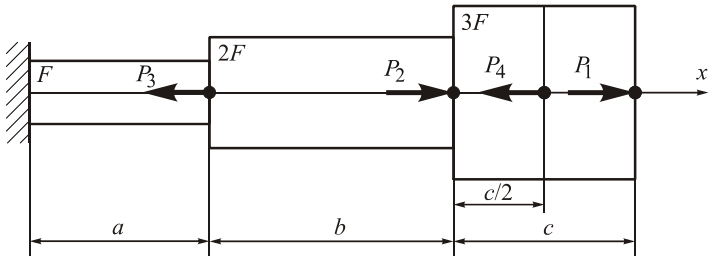
Variant: 26 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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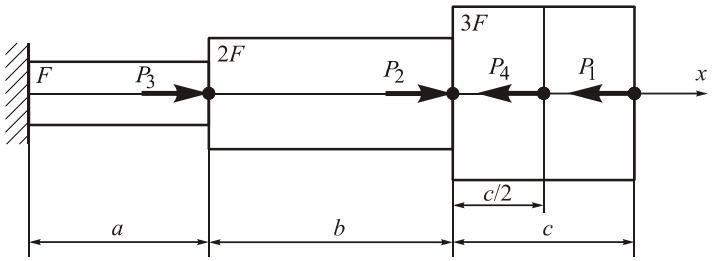
Variant: 27 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

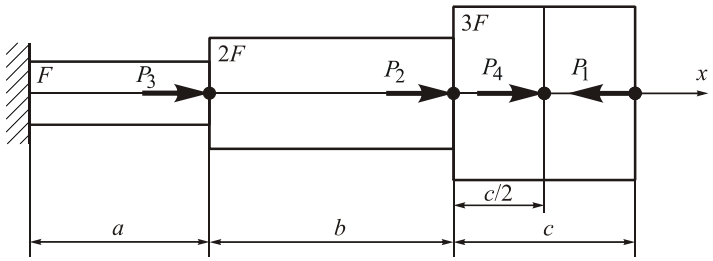
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 28 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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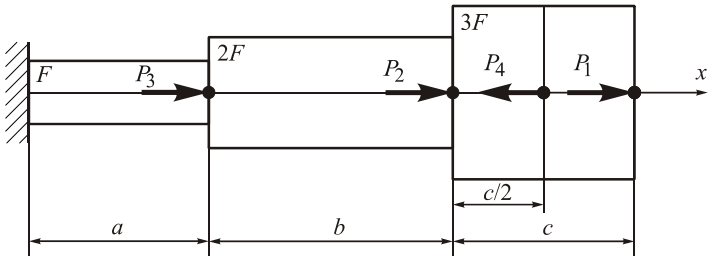
Full name of the student, group

Variant: 29 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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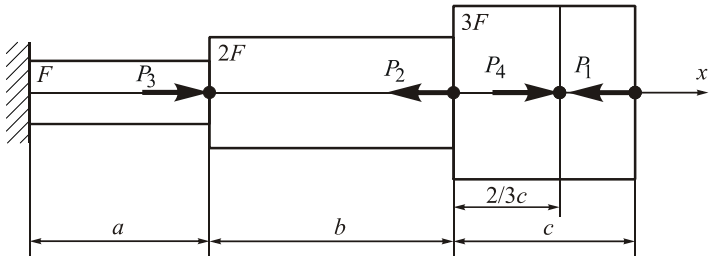
Full name of the student, group

Variant: 30 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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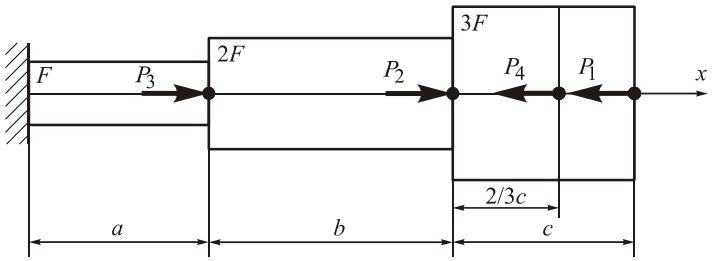
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 31 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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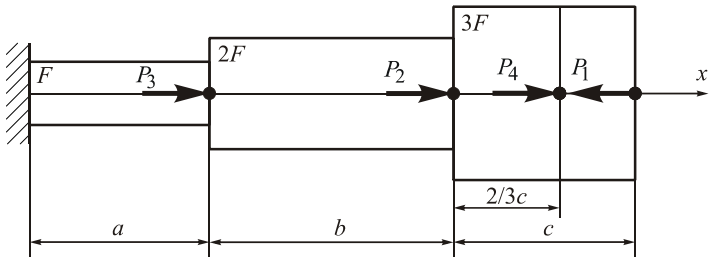
Full name of the student, group

Variant: 32 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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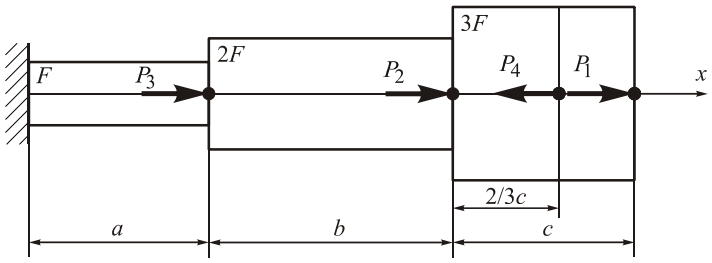
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 33 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
Document: home problem
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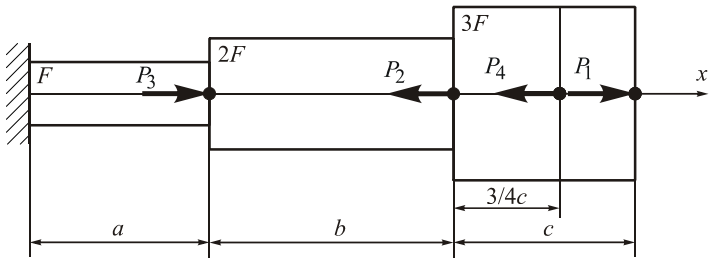
Full name of the student, group

Variant: 34 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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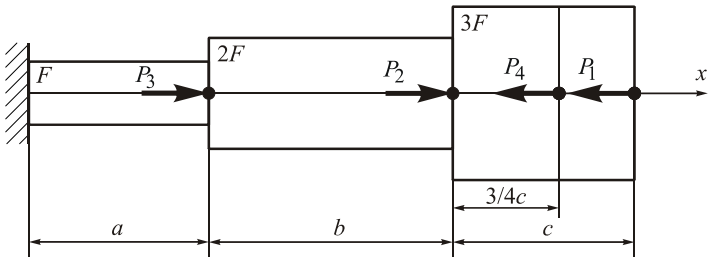
Full name of the student, group

Variant: 35 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
Document: home problem
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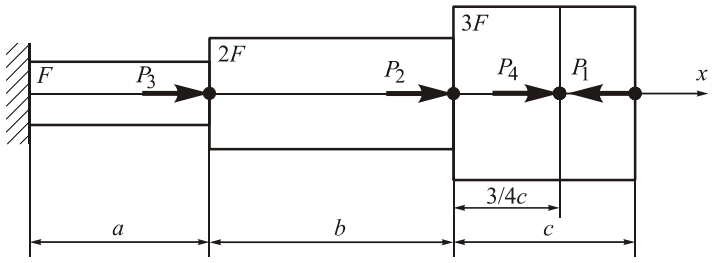
Full name of the student, group

Variant: 36 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
Document: home problem
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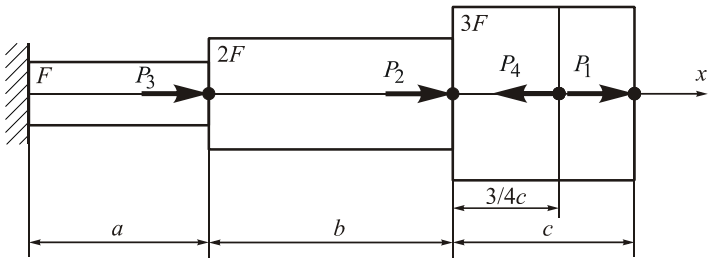
Full name of the student, group

Variant: 37 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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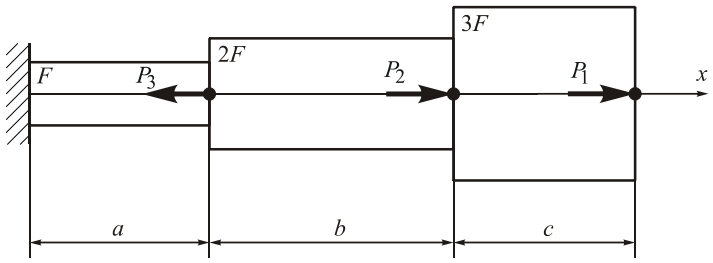
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 38 **Complexity: 1**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN,
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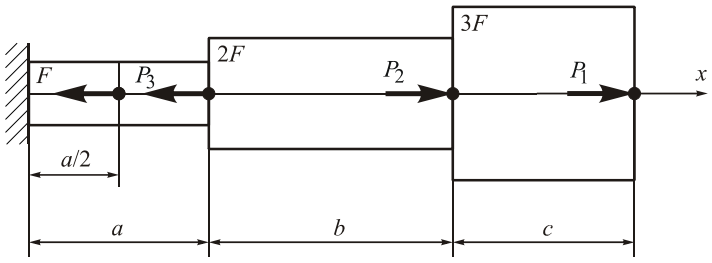
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 39 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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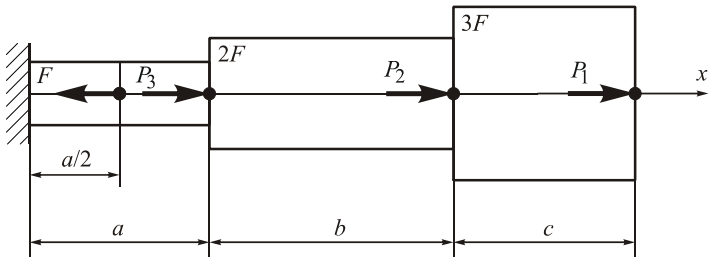
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 40 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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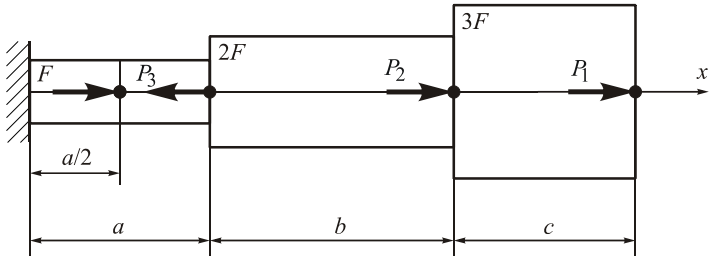
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 41 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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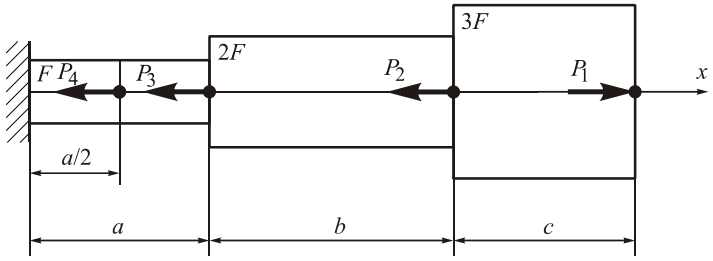
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 42 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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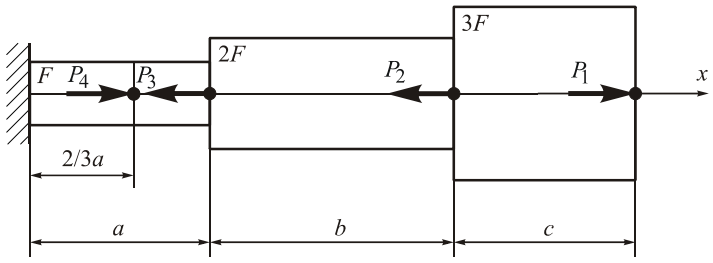
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 43 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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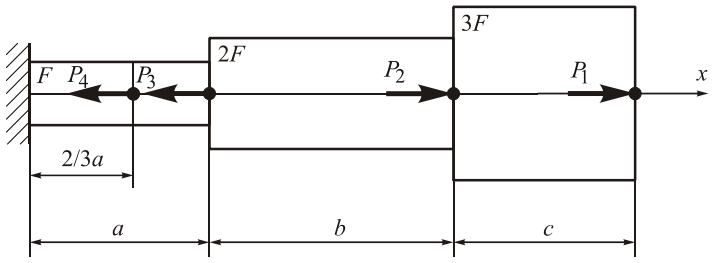
Full name of the student, group

Variant: 44 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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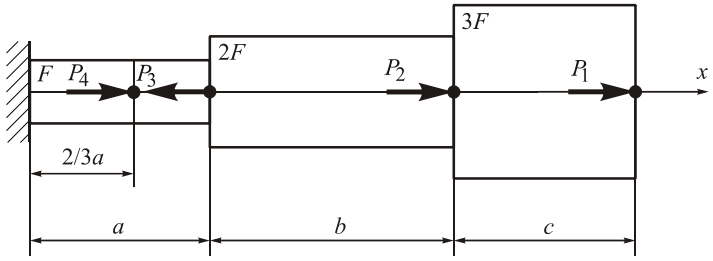
Full name of the student, group

Variant: 45 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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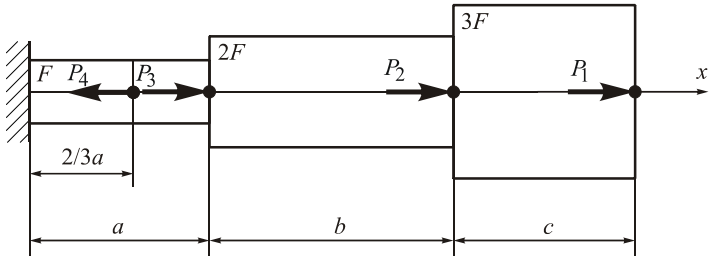
Variant: 46 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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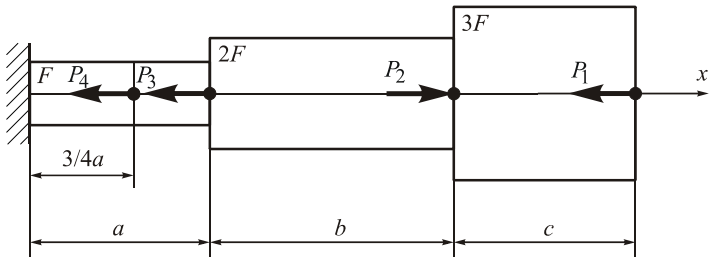
Variant: 47 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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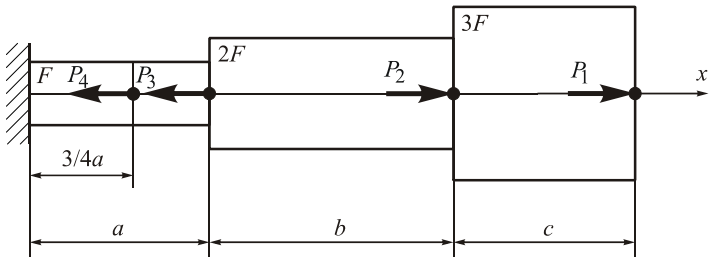
Full name of the student, group

Variant: 48 **Complexity: 2**



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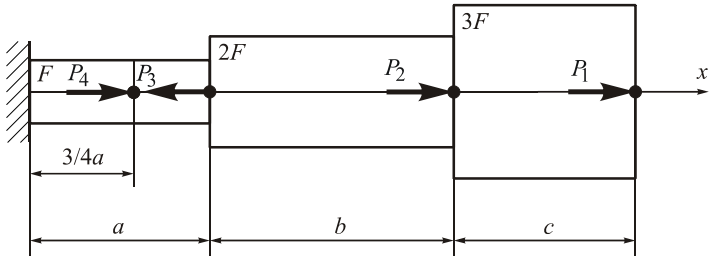
Full name of the student, group

Variant: 49 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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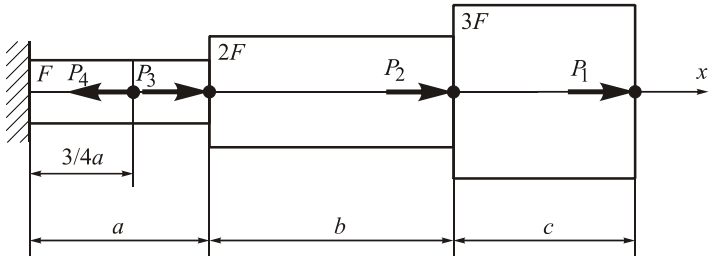
Full name of the student, group

Variant: 50 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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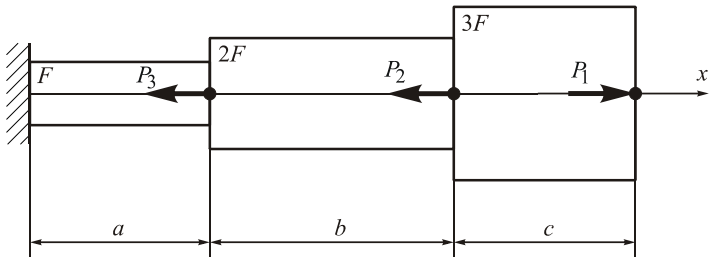
Variant: 51 **Complexity: 1**



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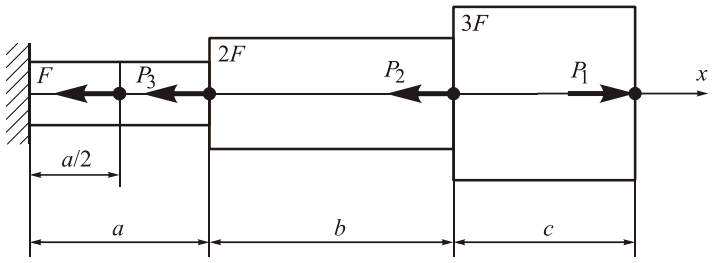
Full name of the student, group

Variant: 52 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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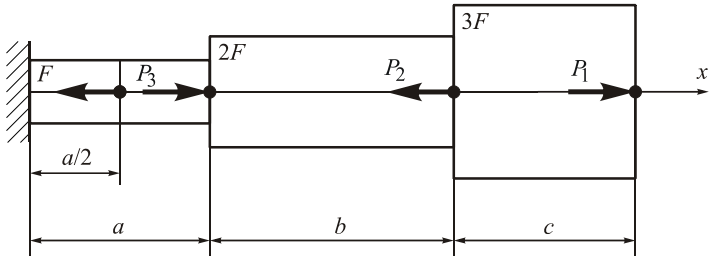
Variant: 53 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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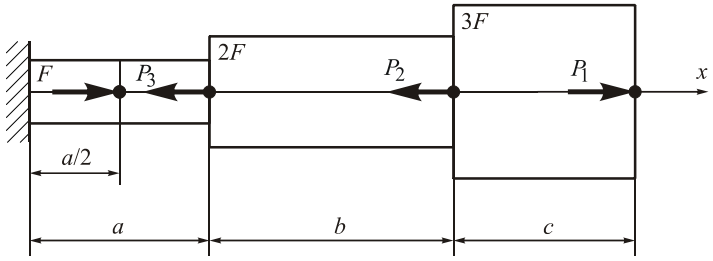
Full name of the student, group

Variant: 54 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
a = 3 m, b = 4 m, c = 5 m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

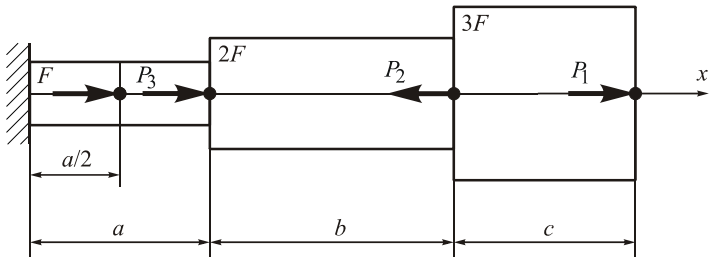
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 55 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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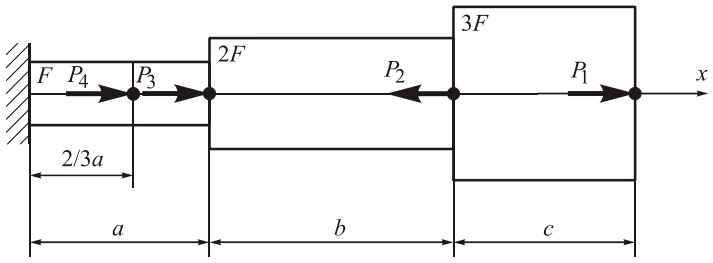
Full name of the student, group

Variant: 56 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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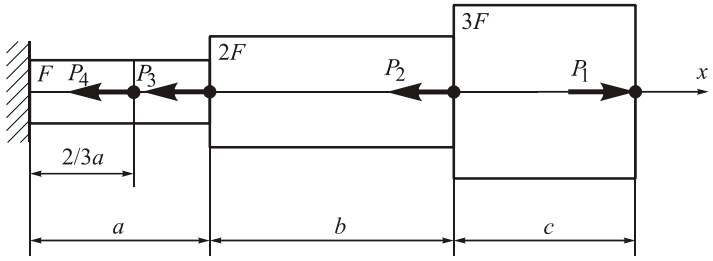
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 57 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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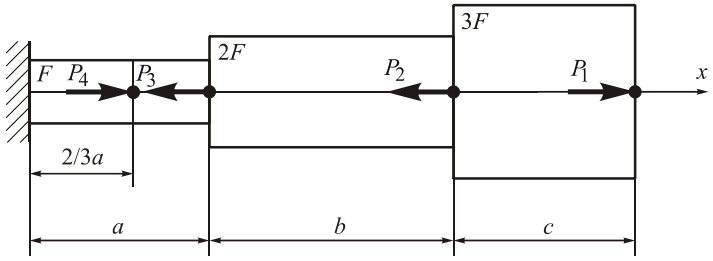
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 58 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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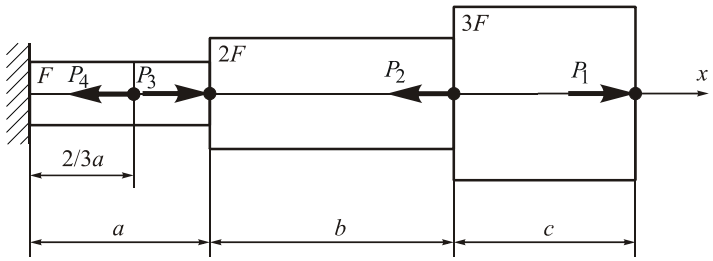
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 59 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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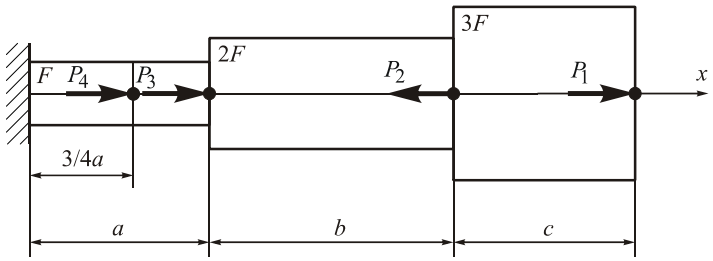
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 60 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Department of aircraft strength

Subject: mechanics of materials
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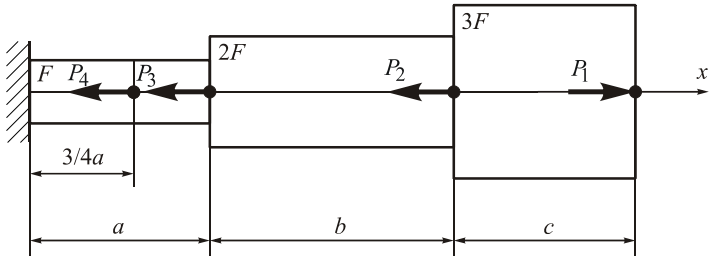
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 61 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
Document: home problem
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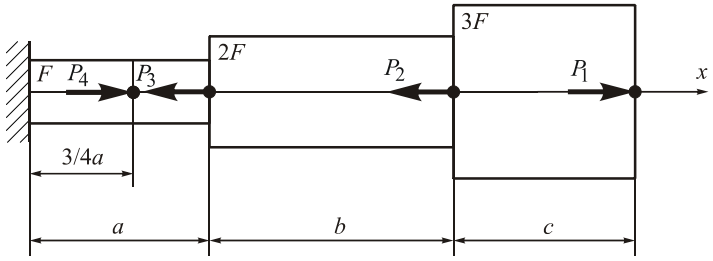
Full name of the student, group

Variant: 62 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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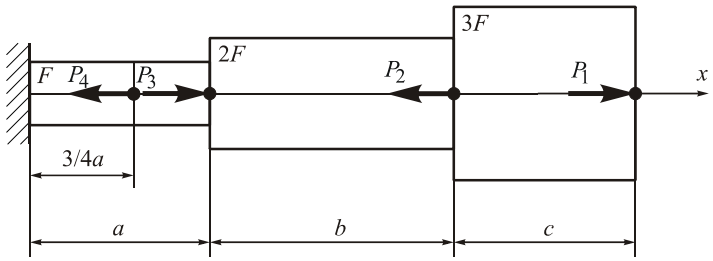
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 63 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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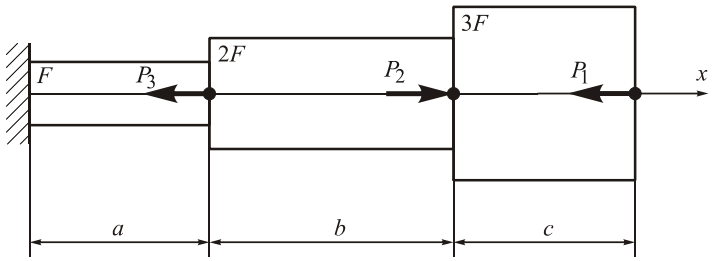
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 64 **Complexity: 1**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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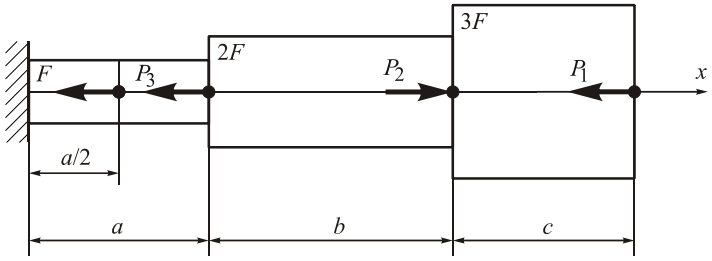
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 65 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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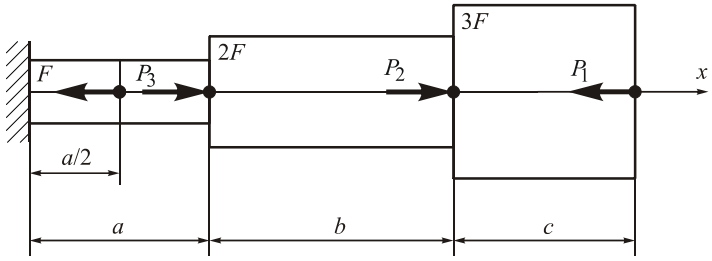
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 66 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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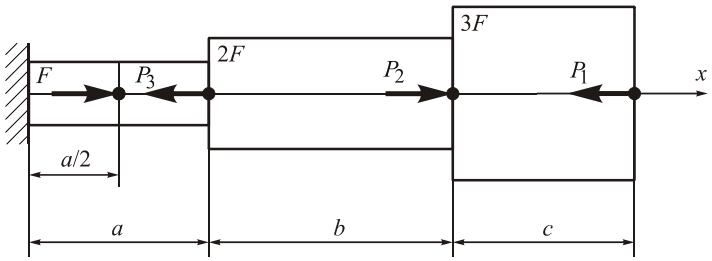
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 67 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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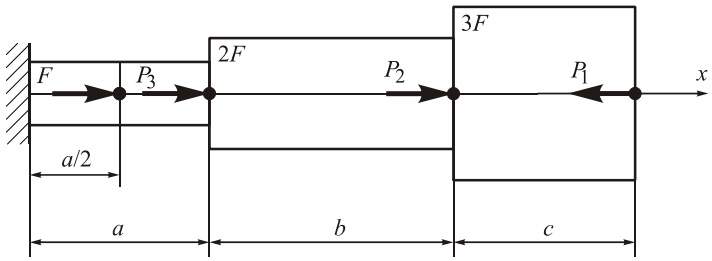
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 68 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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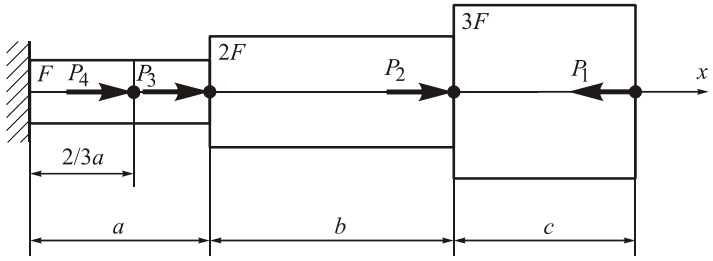
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 69 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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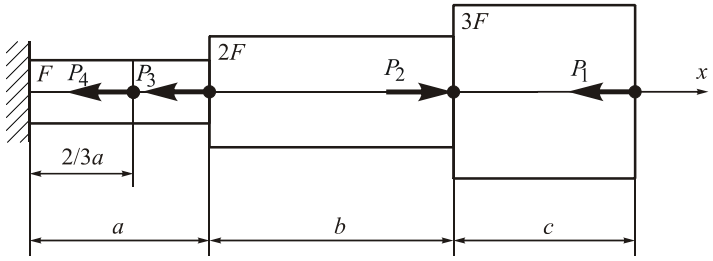
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 70 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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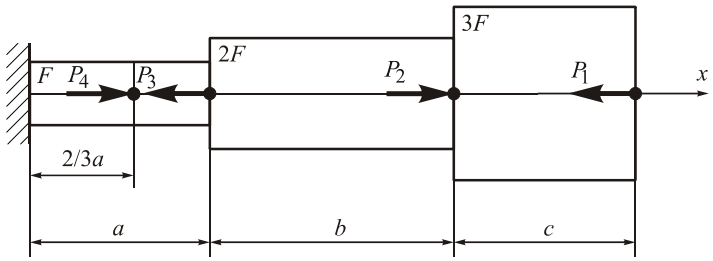
Variant: 71 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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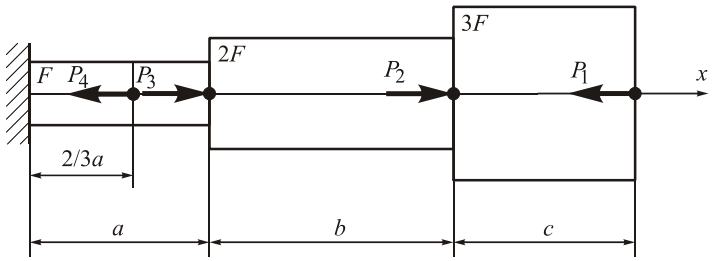
Variant: 72 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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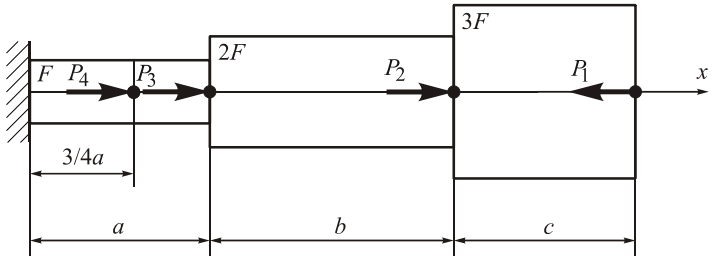
Full name of the student, group

Variant: 73 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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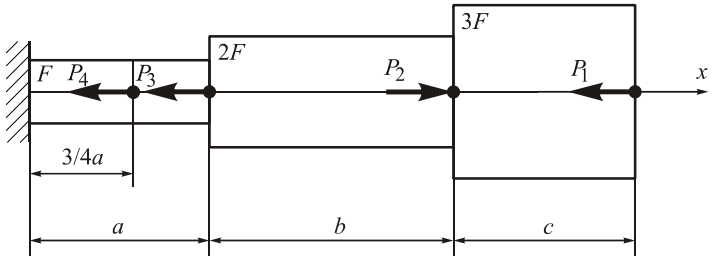
Full name of the student, group

Variant: 74 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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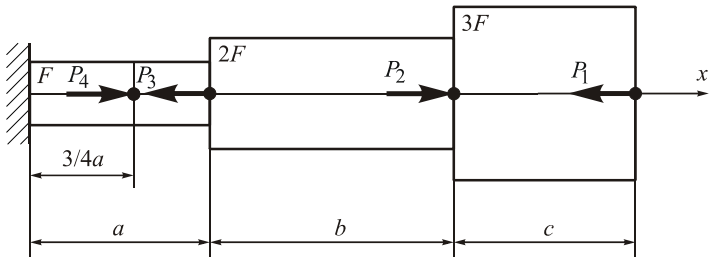
Full name of the student, group

Variant: 75 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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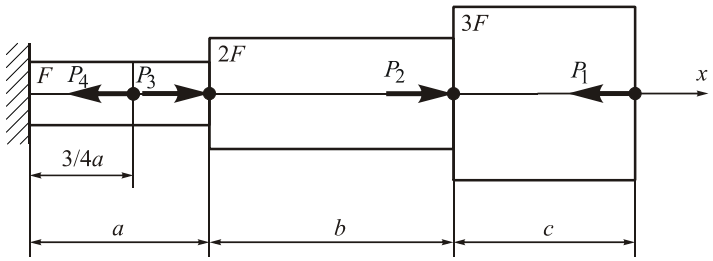
Full name of the student, group

Variant: 76 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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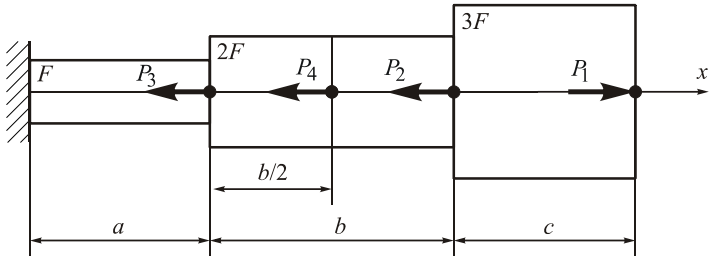
Full name of the student, group

Variant: 77 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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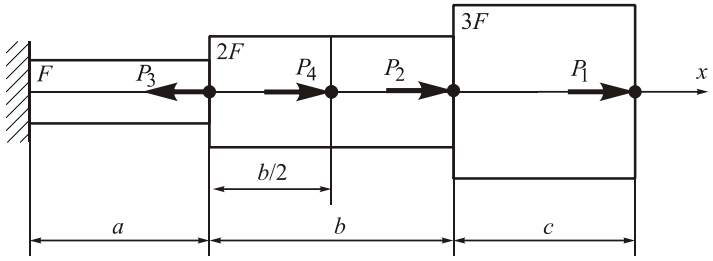
Full name of the student, group

Variant: 78 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

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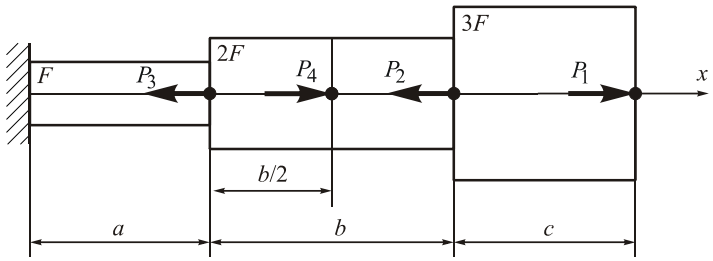
Full name of the student, group

Variant: 79 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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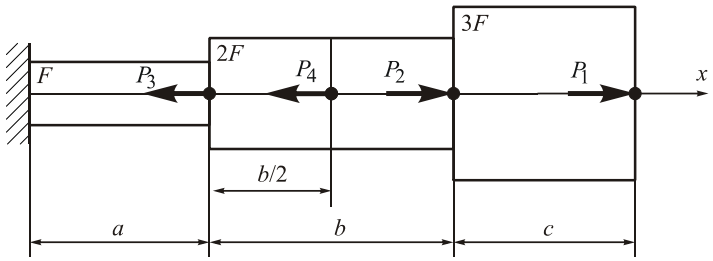
Full name of the student, group

Variant: 80 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

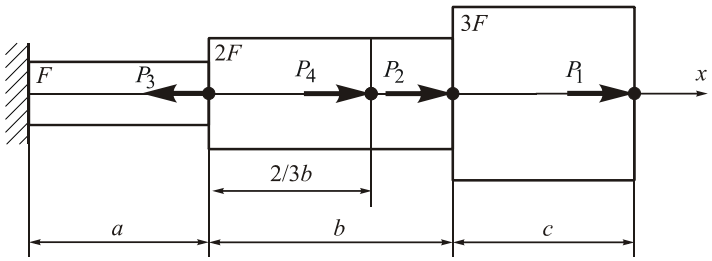
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 81 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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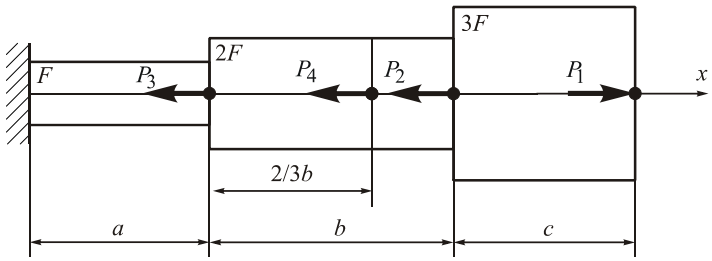
Full name of the student, group

Variant: 82 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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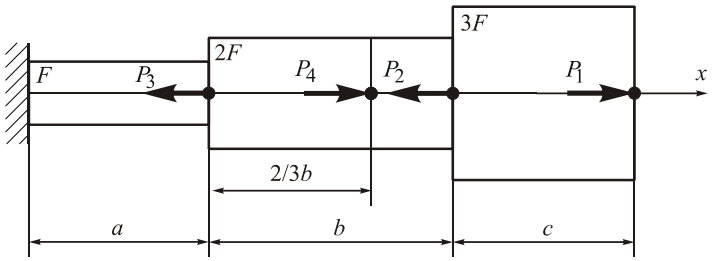
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 83 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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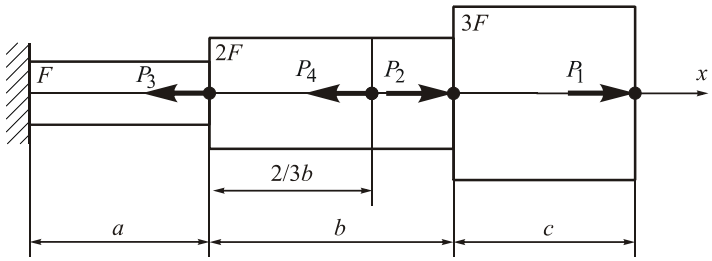
Full name of the student, group

Variant: 84 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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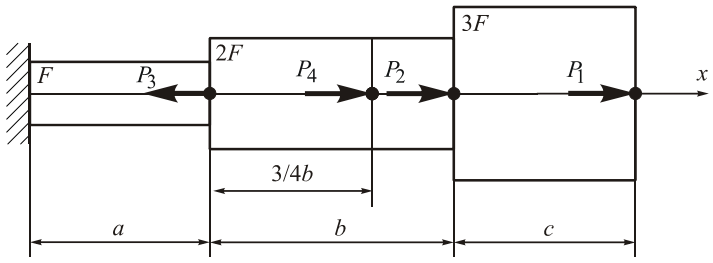
Full name of the student, group

Variant: 85 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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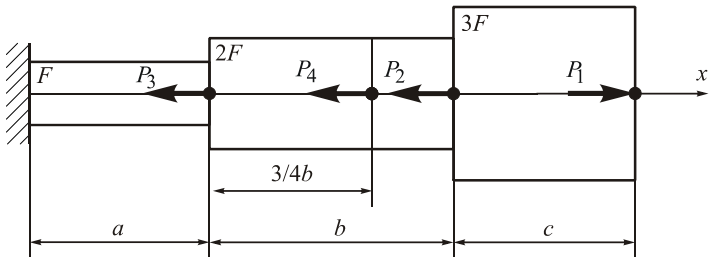
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 86 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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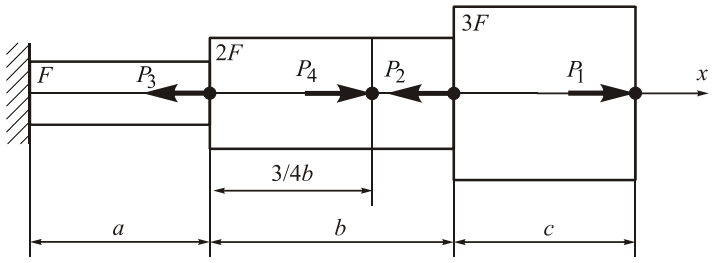
Variant: 87 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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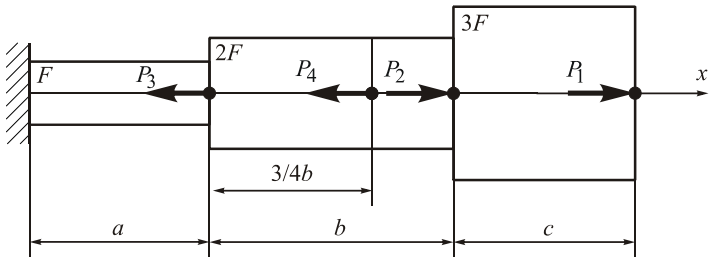
Variant: 88 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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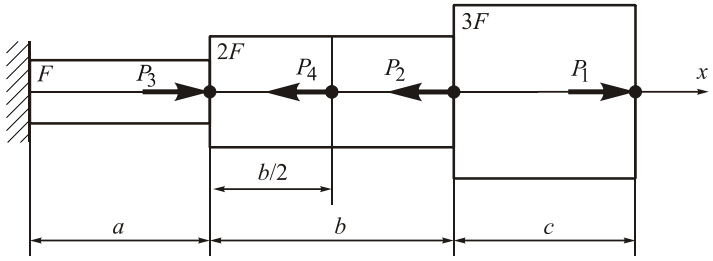
Variant: 89 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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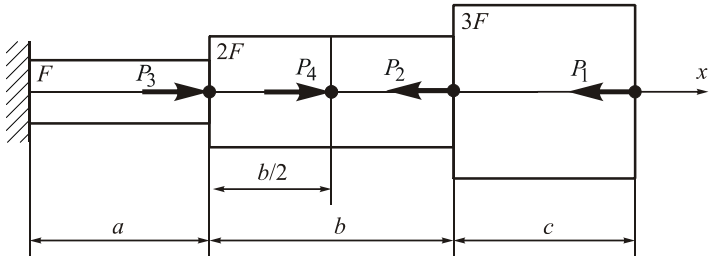
Variant: 90 **Complexity: 2**



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Subject: mechanics of materials
Document: home problem
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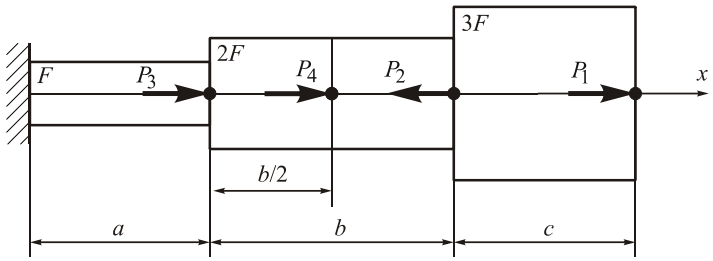
Full name of the student, group

Variant: 91 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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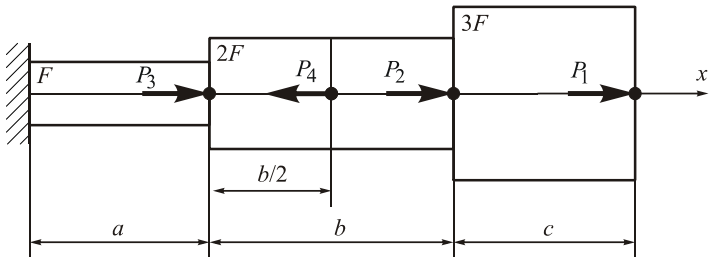
Variant: 92 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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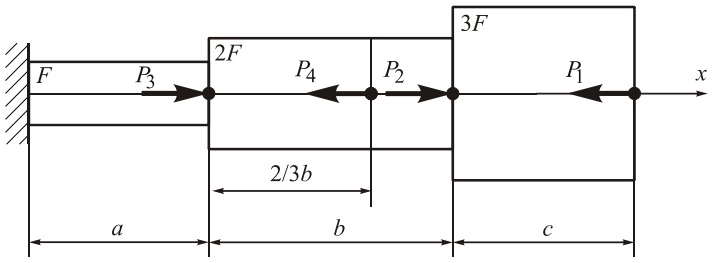
Variant: 93 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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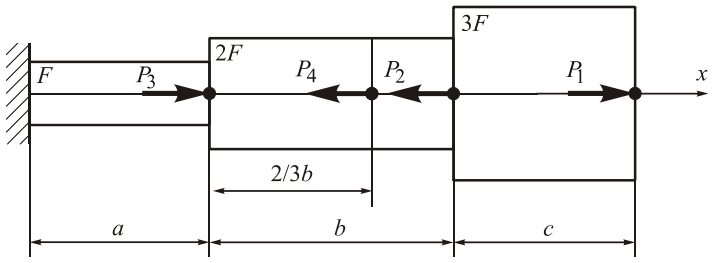
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 94 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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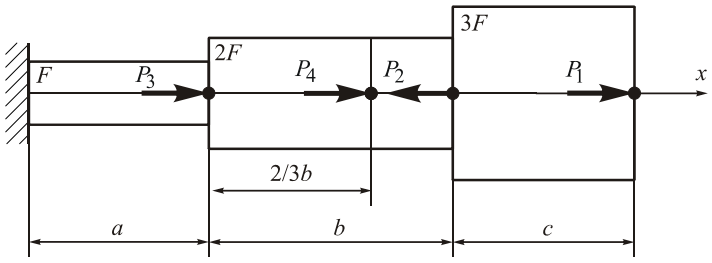
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 95 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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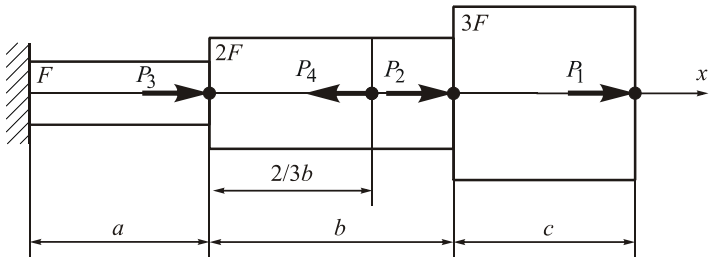
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 96 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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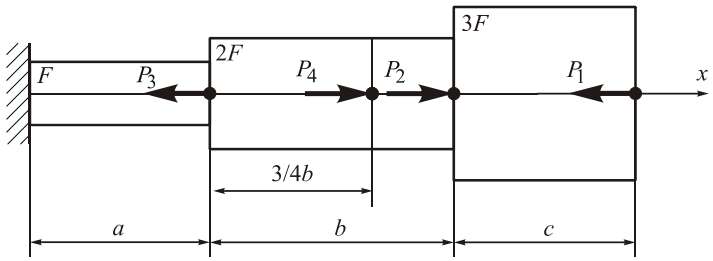
Full name of the student, group

Variant: 97 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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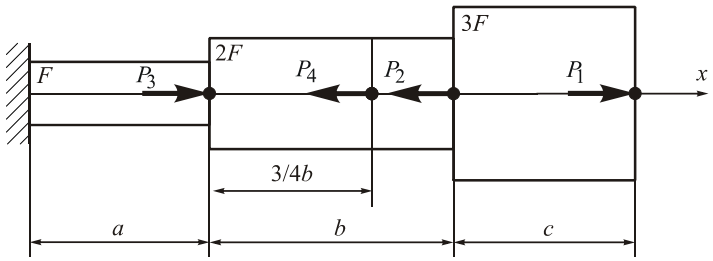
Variant: 98 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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Subject: mechanics of materials
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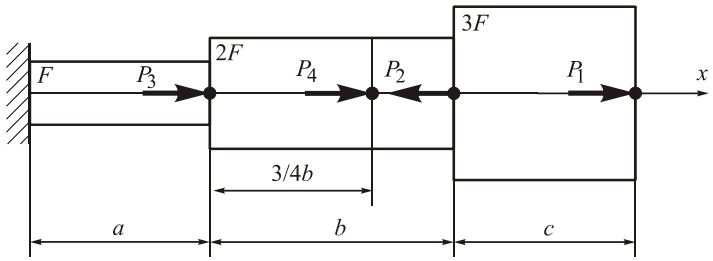
Full name of the student, group

Variant: 99 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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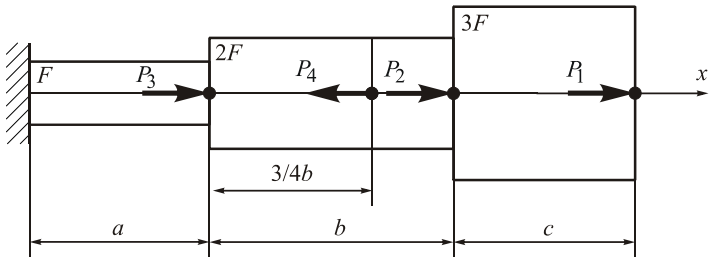
Full name of the student, group

Variant: 100 **Complexity: 2**



Given: $P_1 = 20$ kN, $P_2 = 40$ kN, $P_3 = 100$ kN, $P_4 = 80$ kN,
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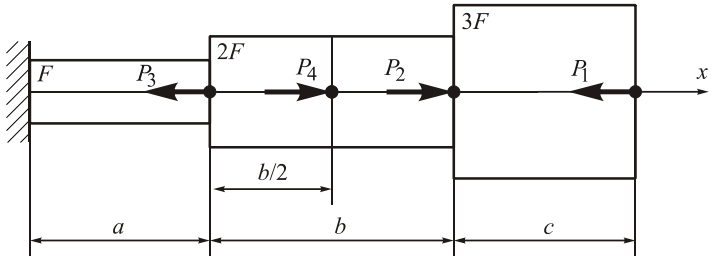
Full name of the student, group

Variant: 101 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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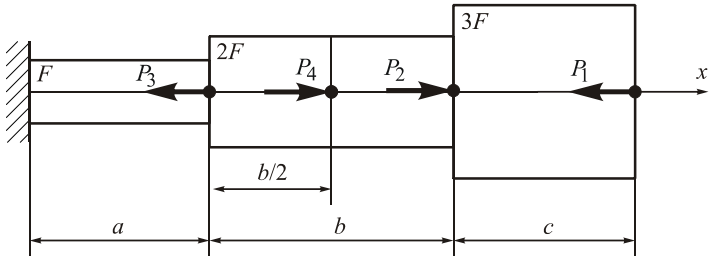
Full name of the student, group

Variant: 102 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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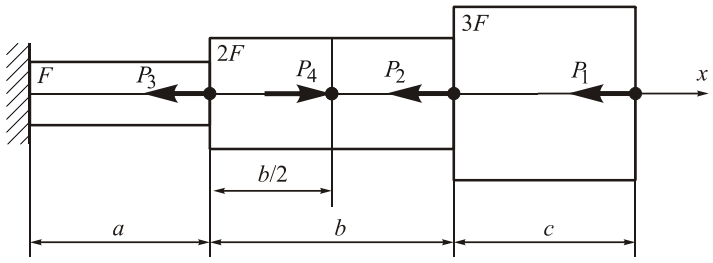
Full name of the student, group

Variant: 103 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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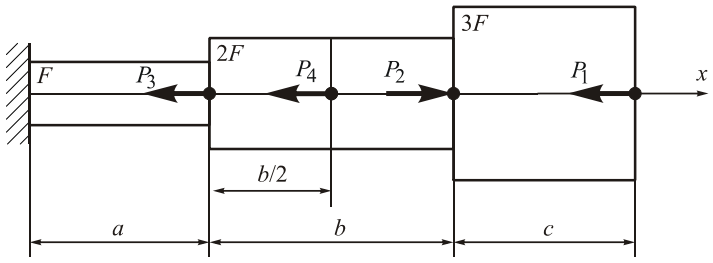
Variant: 104 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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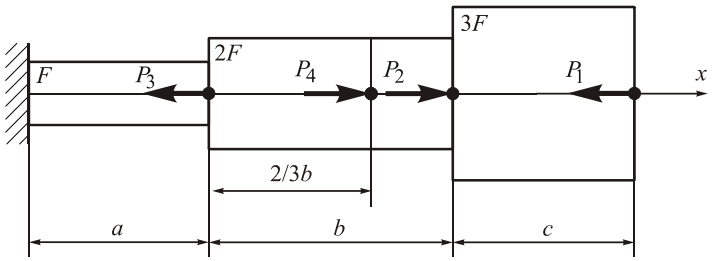
Variant: 105 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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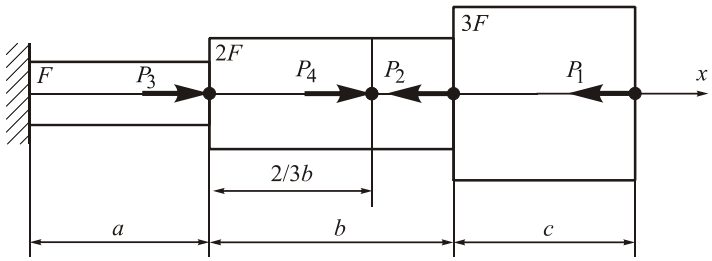
Variant: 106 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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National aerospace university
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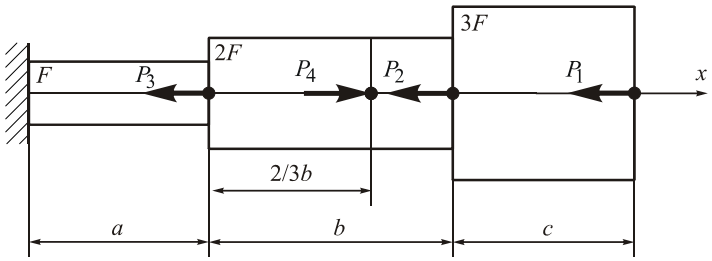
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 107 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

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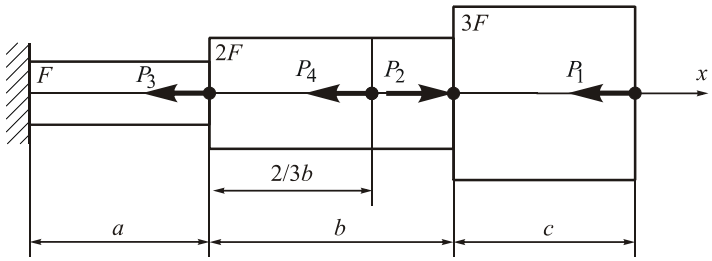

Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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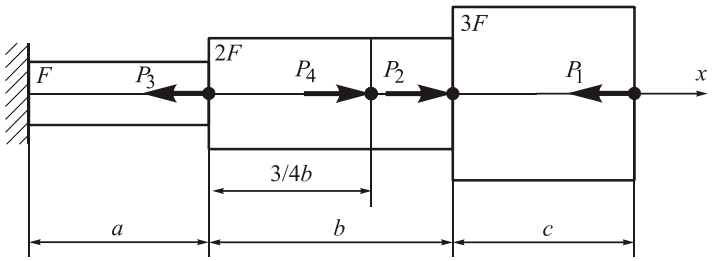

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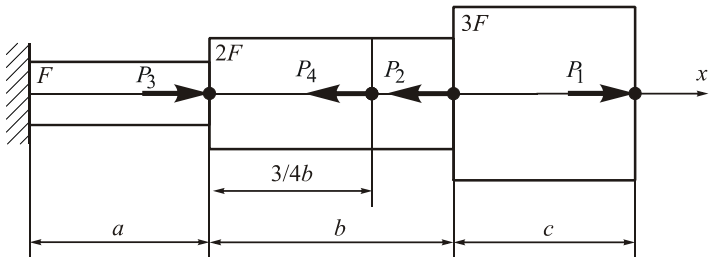
Variant: 110 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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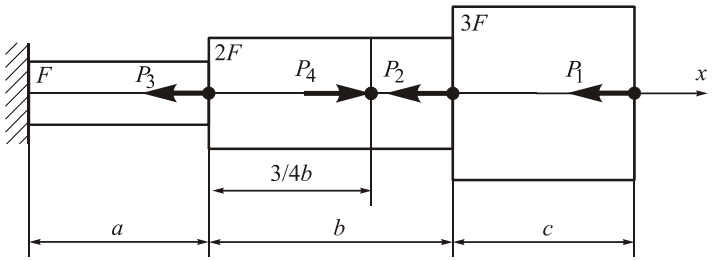
Variant: 111 **Complexity: 2**



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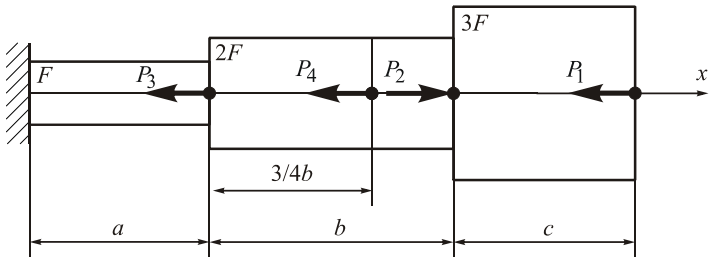
Variant: 112 **Complexity: 2**



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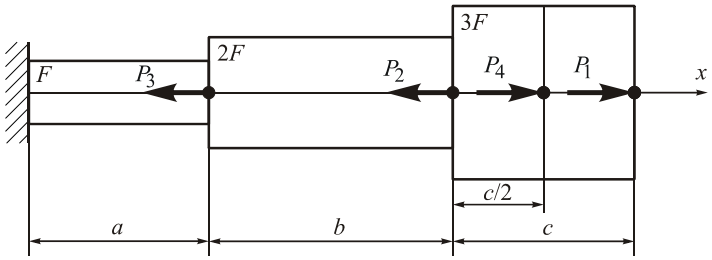
Variant: 113 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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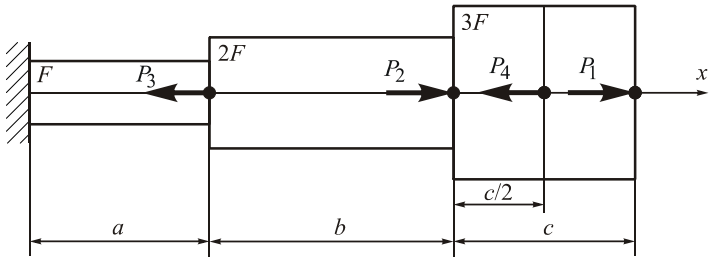
Variant: 114 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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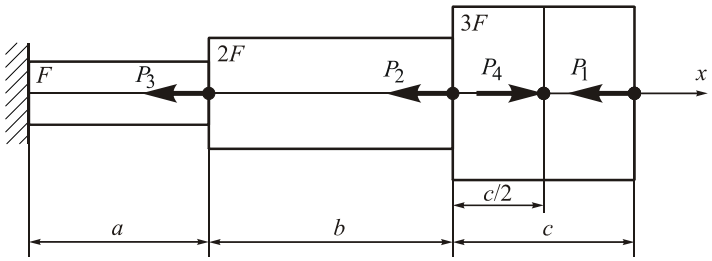
Variant: 115 **Complexity: 2**



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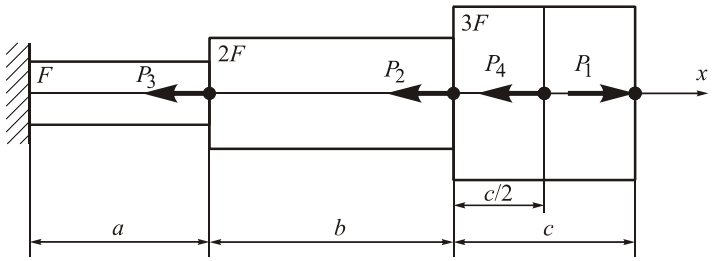
Variant: 116 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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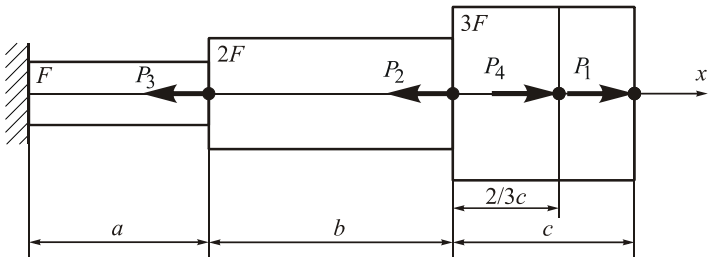
Variant: 117 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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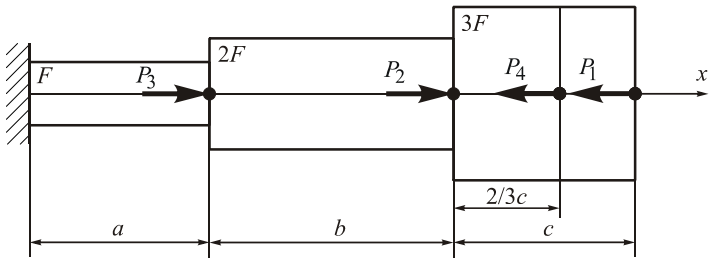
Variant: 118 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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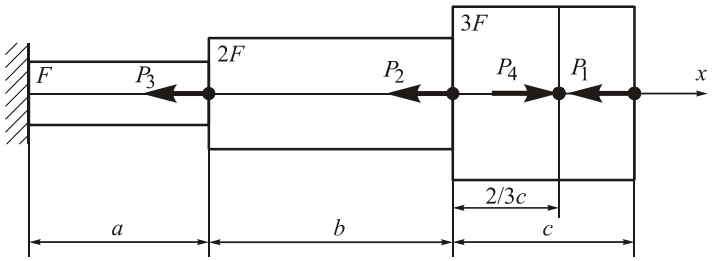
Variant: 119 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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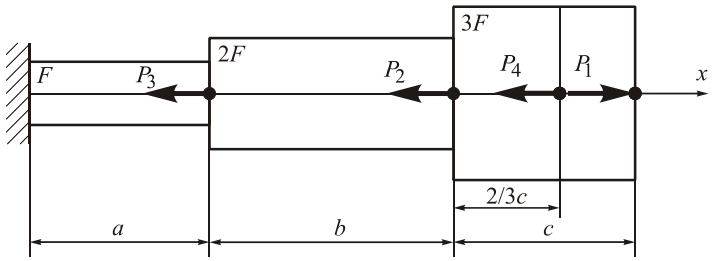
Variant: 120 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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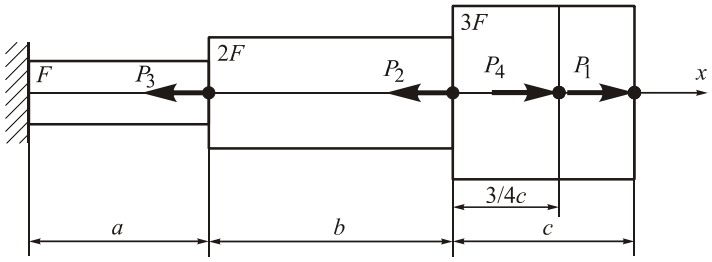
Variant: 121 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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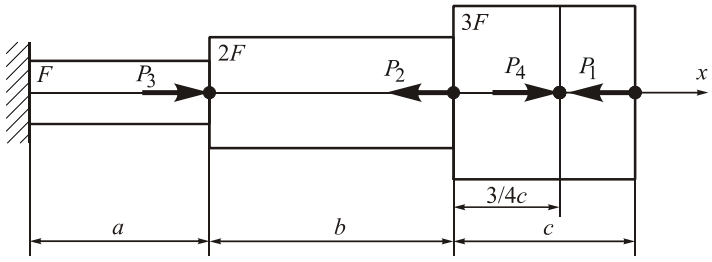
Variant: 122 **Complexity: 2**



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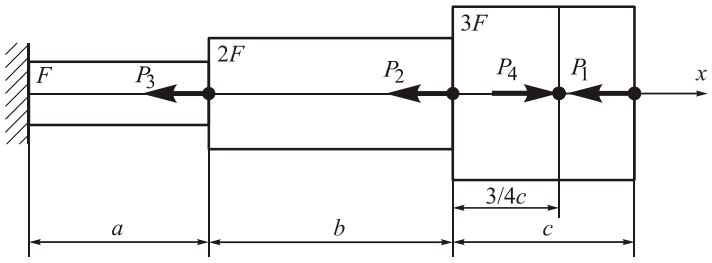
Variant: 123 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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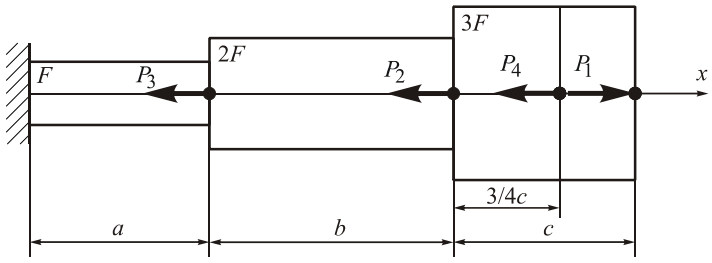
Variant: 124 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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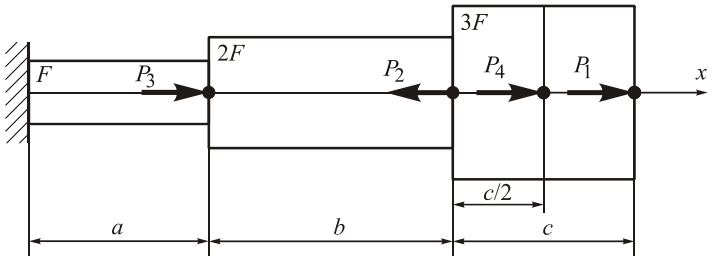
Variant: 125 **Complexity: 2**



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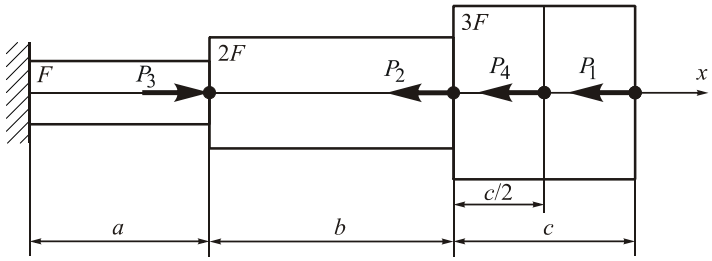
Variant: 126 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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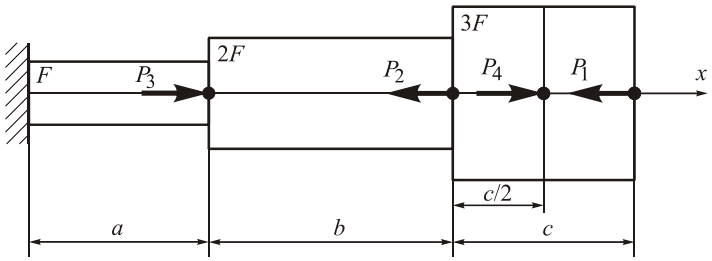
Variant: 127 **Complexity: 2**



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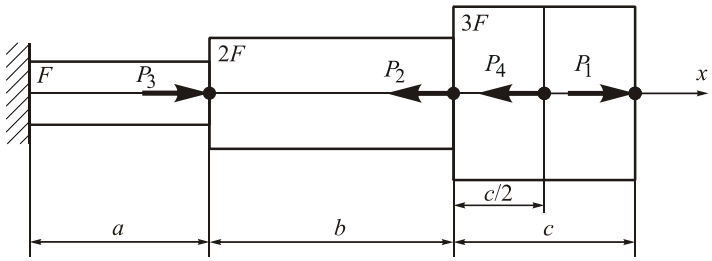

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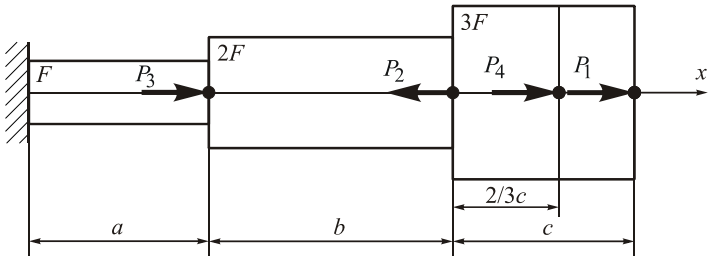

Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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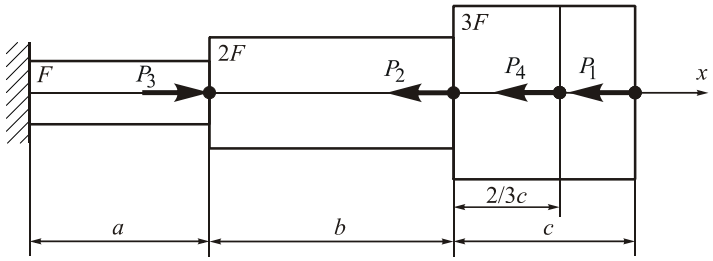

Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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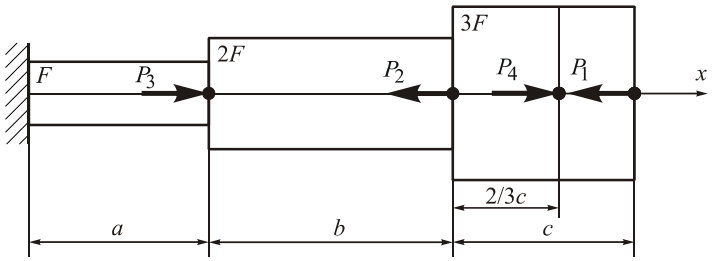
Variant: 131 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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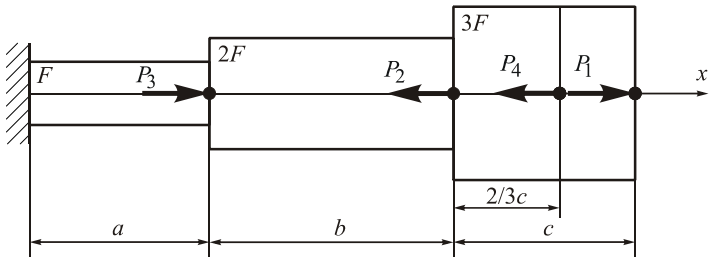
Variant: 132 **Complexity: 2**



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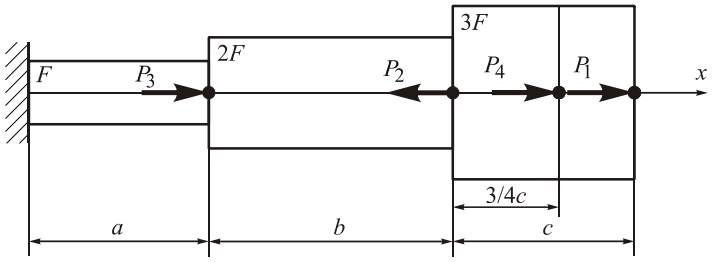
Full name of the student, group

Variant: 133 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

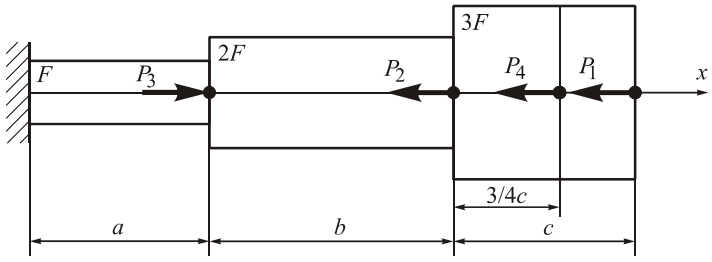
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 134 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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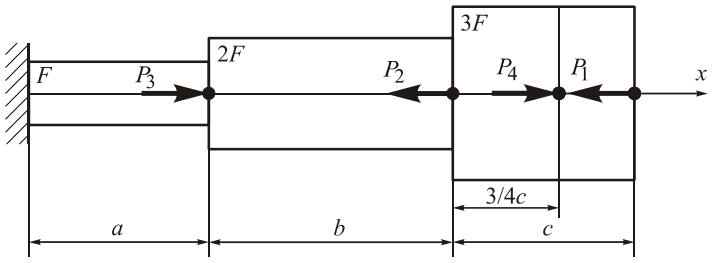
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 135 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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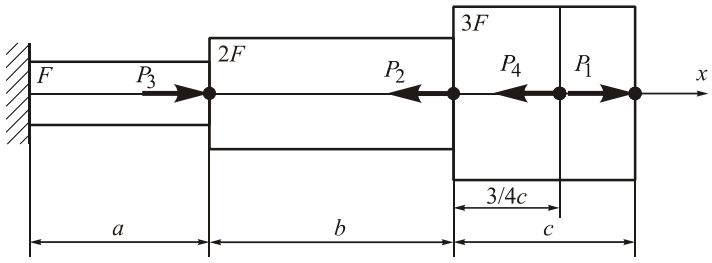
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 136 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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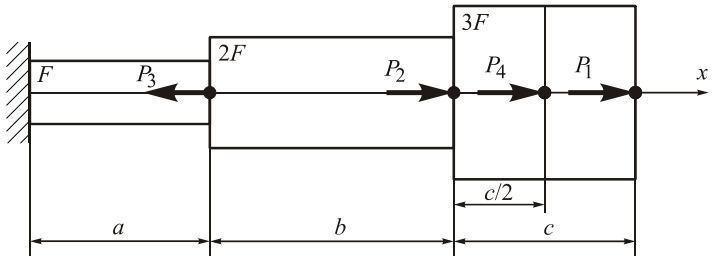
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 137 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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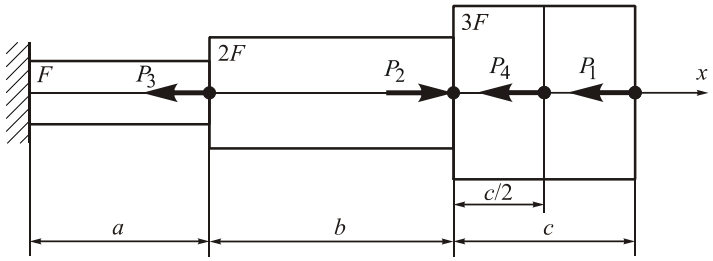
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 138 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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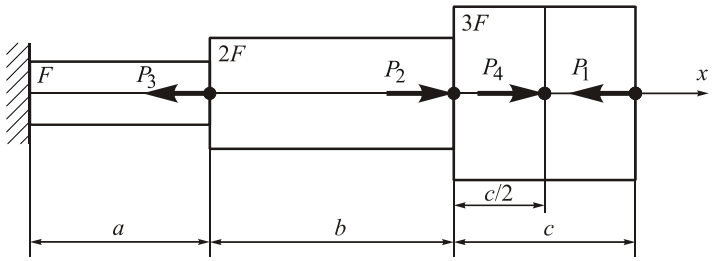
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 139 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Subject: mechanics of materials
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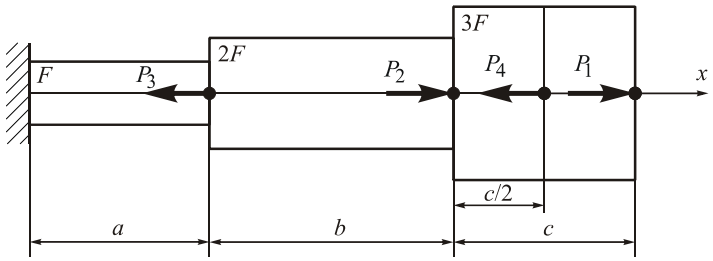
Full name of the student, group

Variant: 140 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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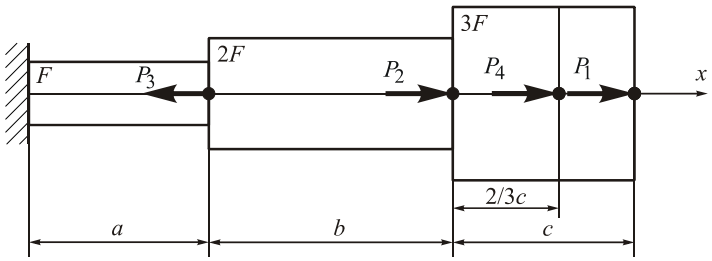
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 141 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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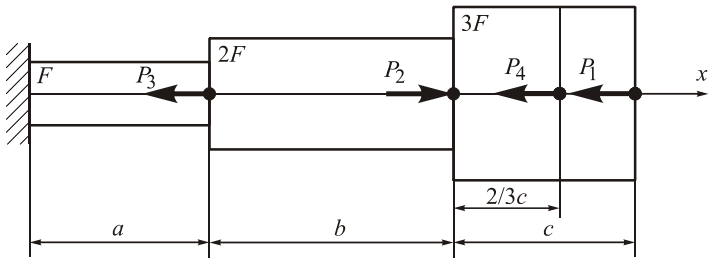
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 142 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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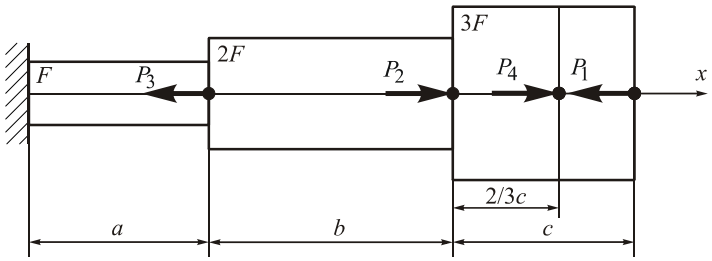
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 143 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Department of aircraft strength

Subject: mechanics of materials
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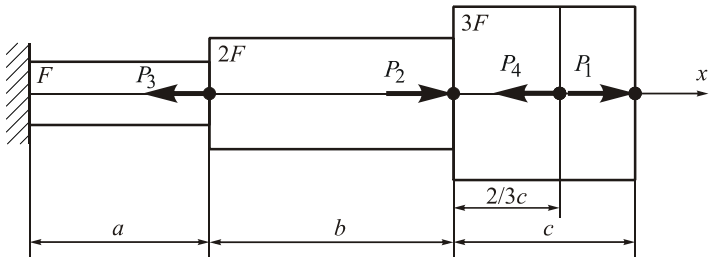
Full name of the student, group

Variant: 144 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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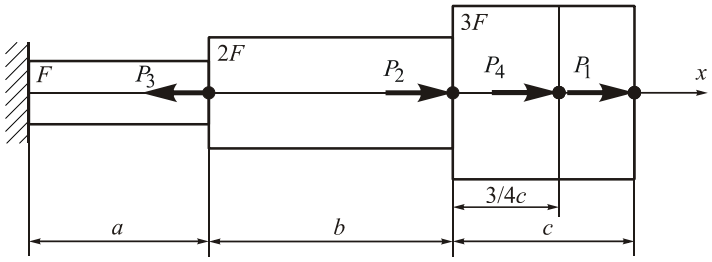
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 145 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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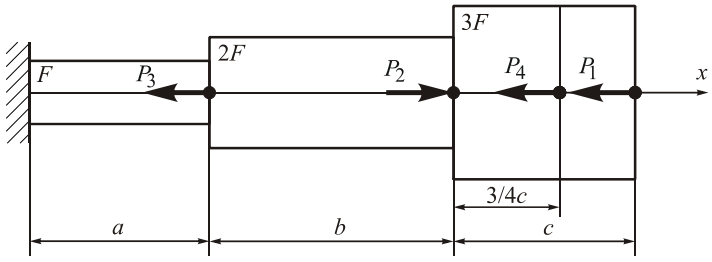
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 146 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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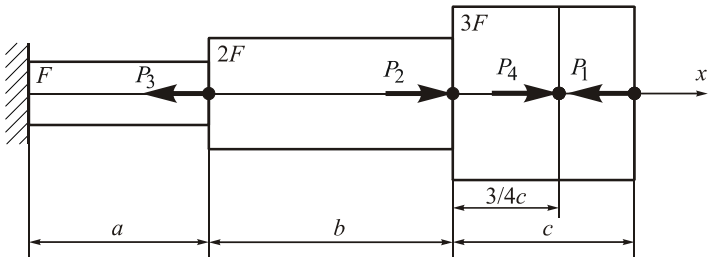
National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 147 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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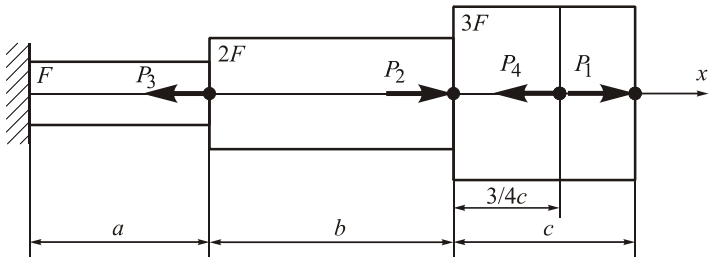
National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 148 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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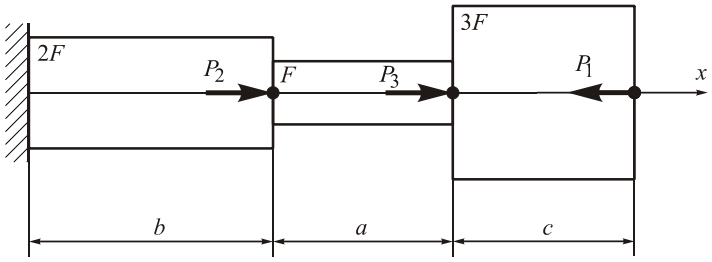
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 149 **Complexity: 1**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN,
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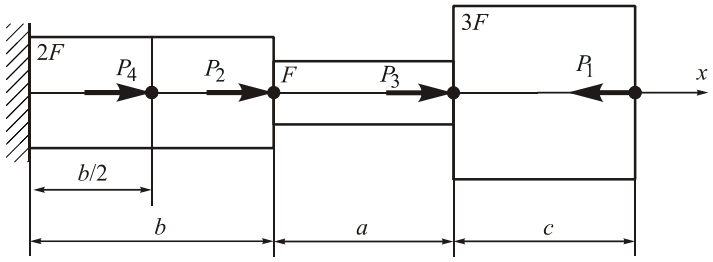
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 150 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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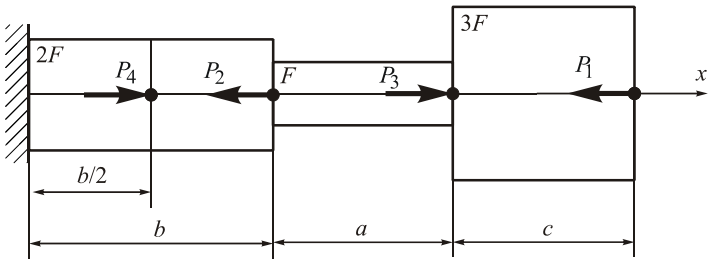
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 151 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Subject: mechanics of materials
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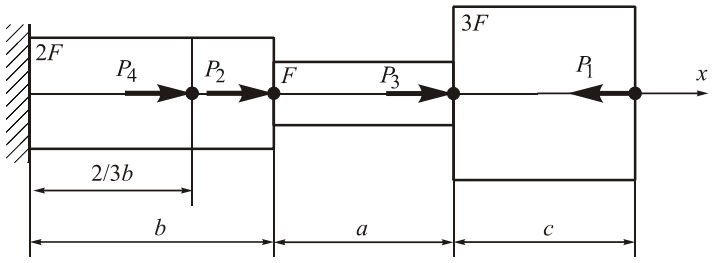
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 152 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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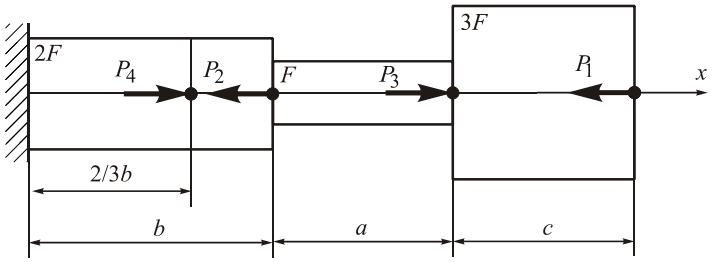
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 153 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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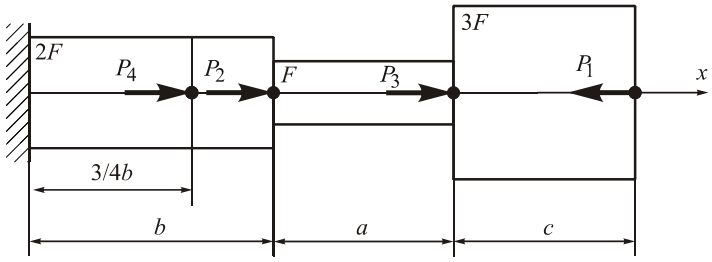
Full name of the student, group

Variant: 154 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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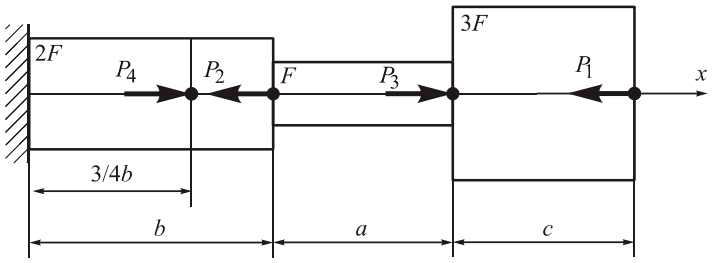
Full name of the student, group

Variant: 155 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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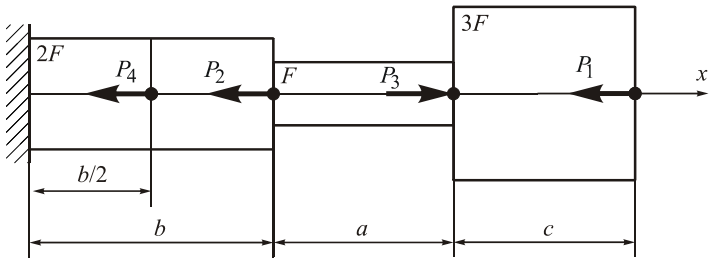
Full name of the student, group

Variant: 156 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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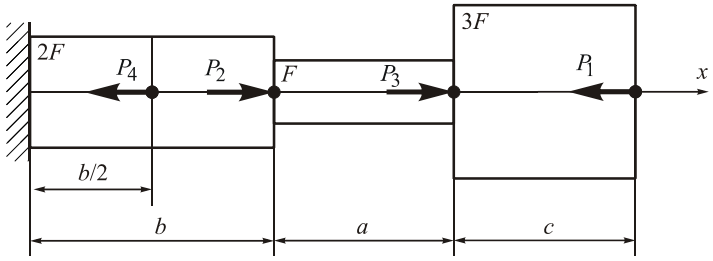
Full name of the student, group

Variant: 157 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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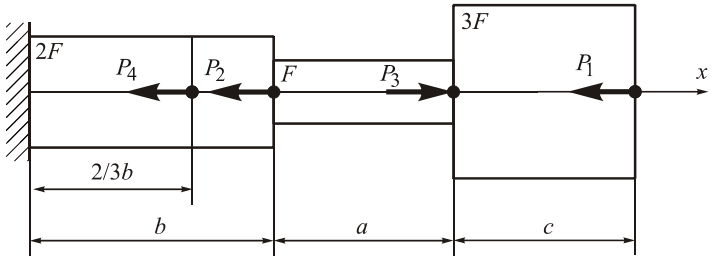
Full name of the student, group

Variant: 158 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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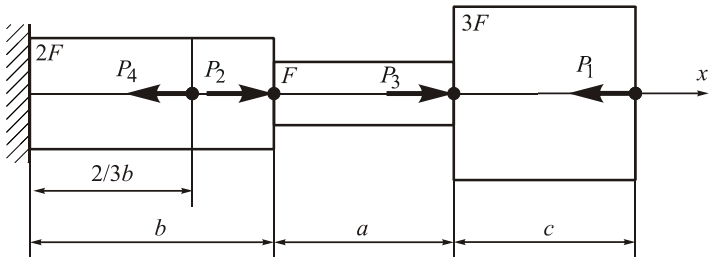
Variant: 159 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

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Full name of the lecturer **signature**

Mark:

National aerospace university
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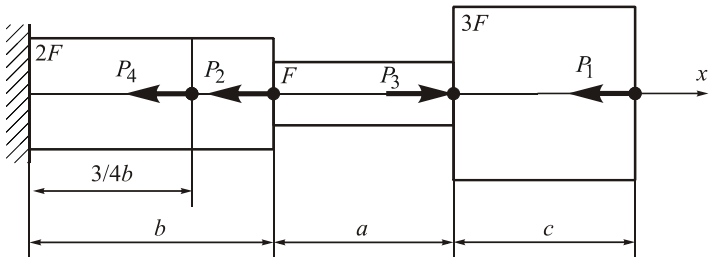
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 160 **Complexity: 2**



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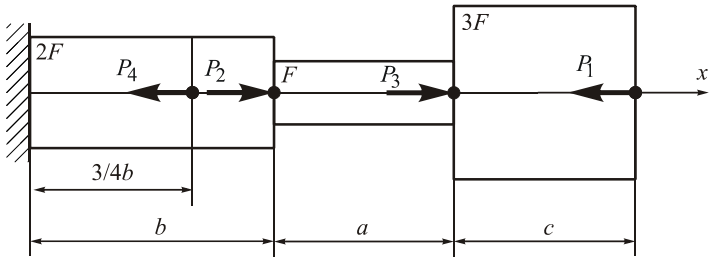
Variant: 161 **Complexity: 2**



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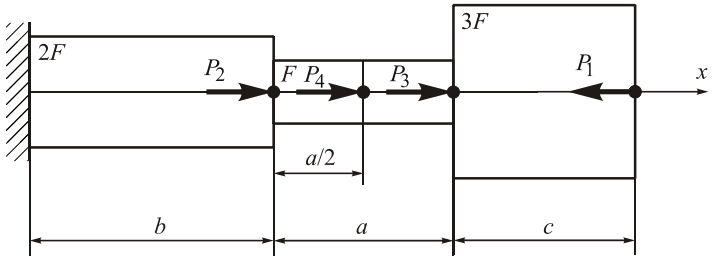
Variant: 162 **Complexity: 2**



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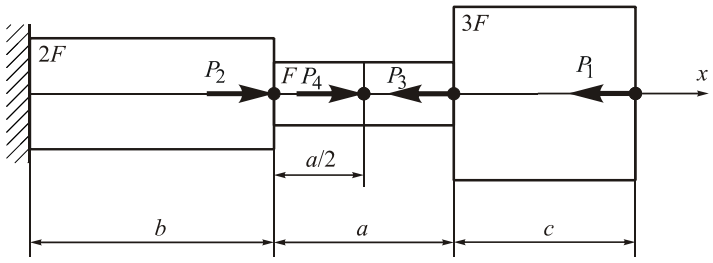

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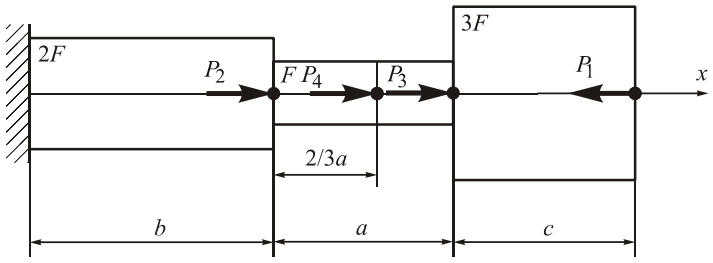
Variant: 164 **Complexity: 2**



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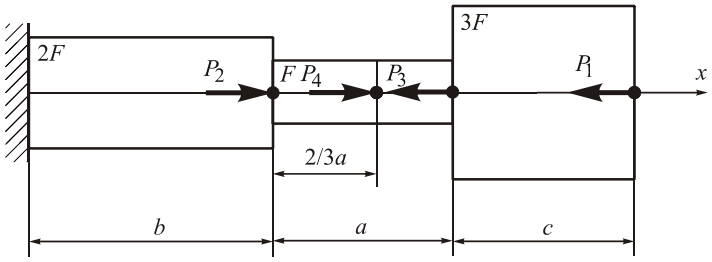
Variant: 165 **Complexity: 2**



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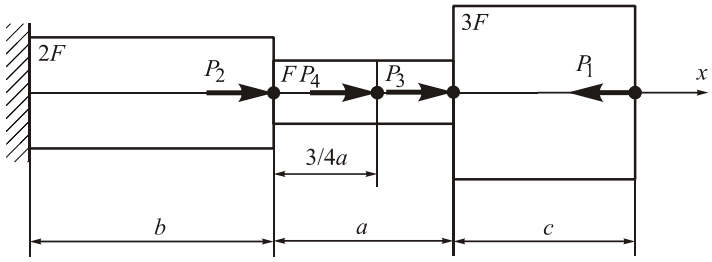
Variant: 166 **Complexity: 2**



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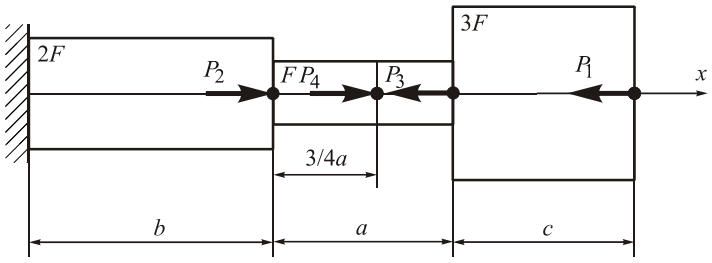
Variant: 167 **Complexity: 2**



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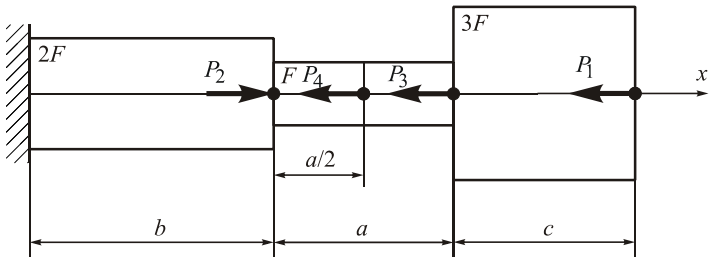
Variant: 168 **Complexity: 2**



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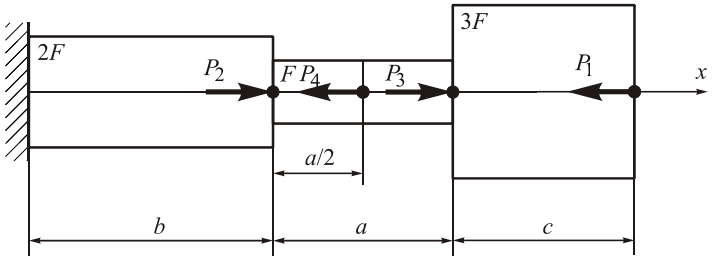

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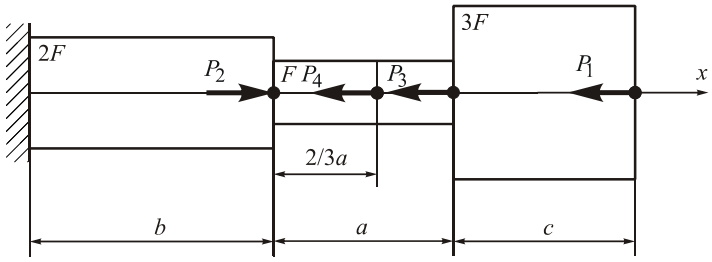
Variant: 170 **Complexity: 2**



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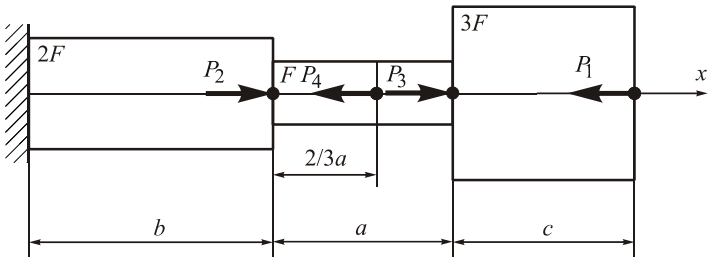

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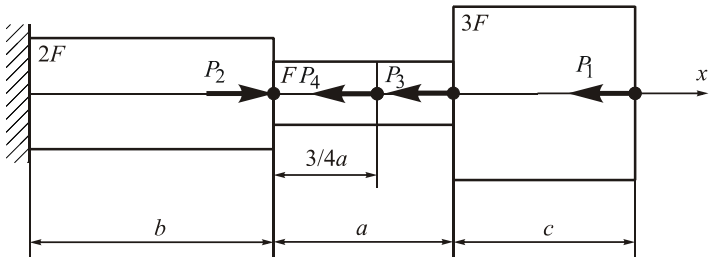
Variant: 172 **Complexity: 2**



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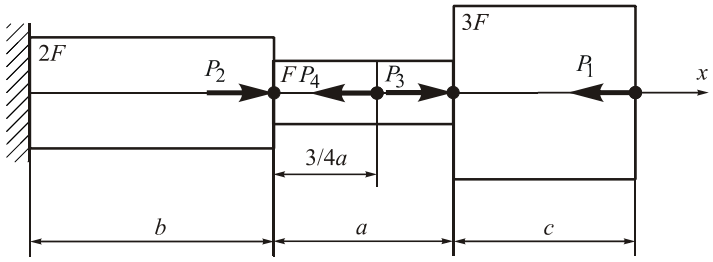

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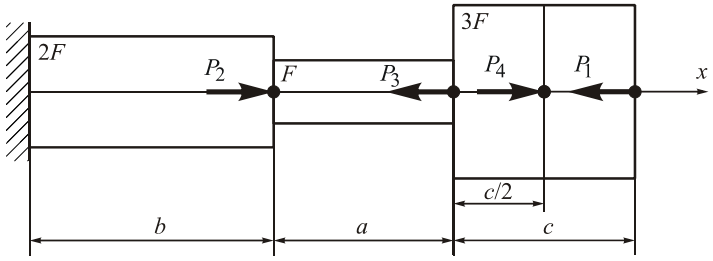
Variant: 174 **Complexity: 2**



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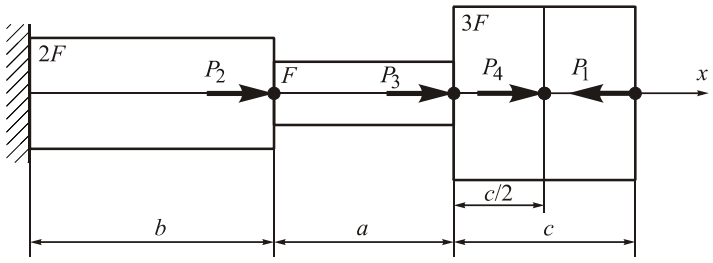
Variant: 175 **Complexity: 2**



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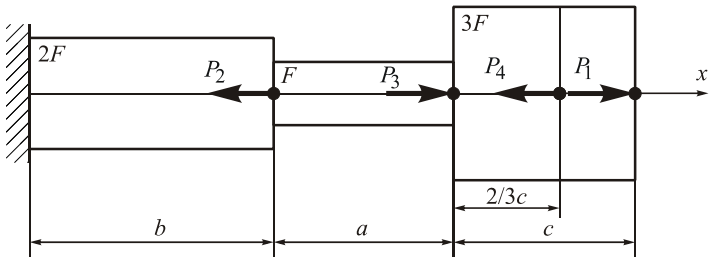

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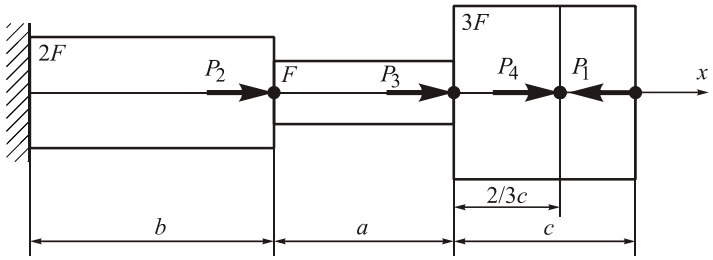

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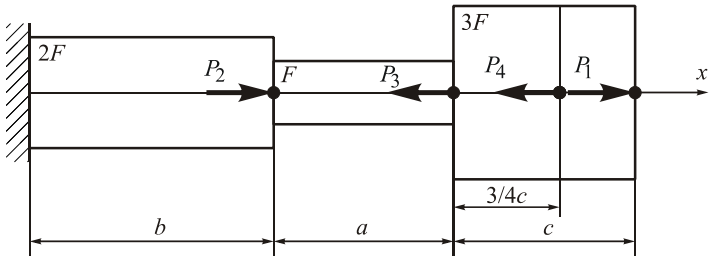

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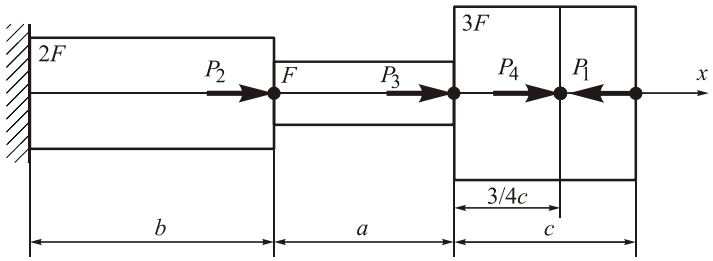

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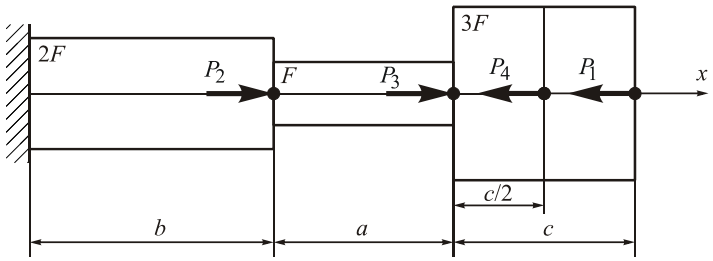
Variant: 180 **Complexity: 2**



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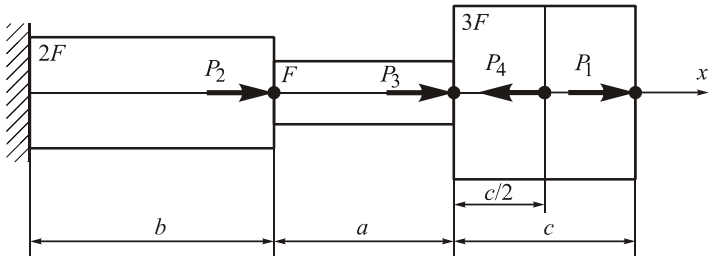
Variant: 181 **Complexity: 2**



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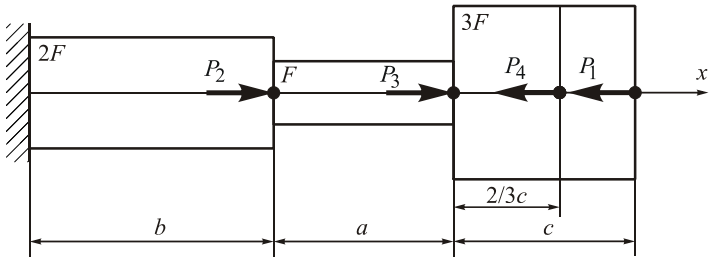

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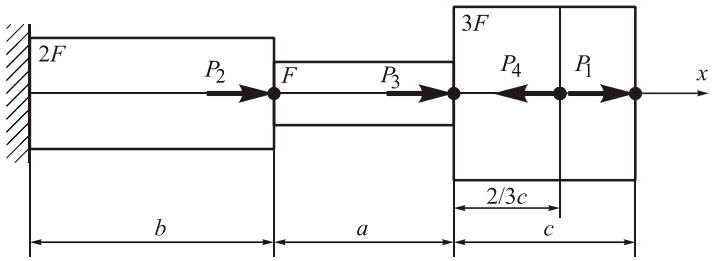

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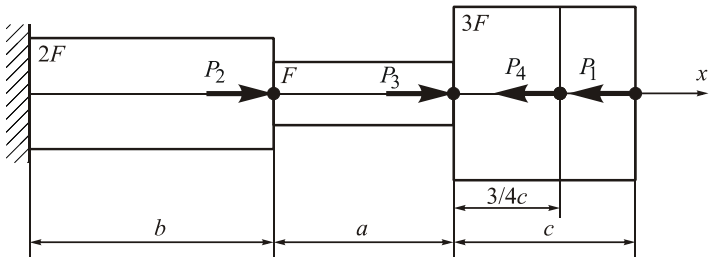

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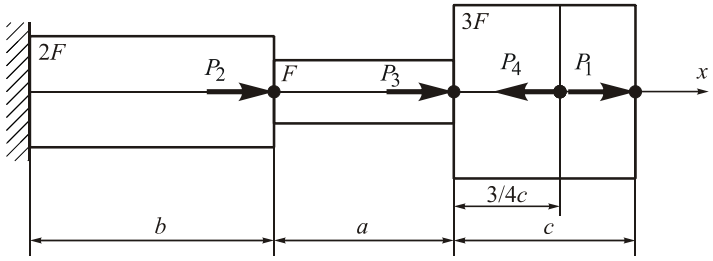
Variant: 185 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

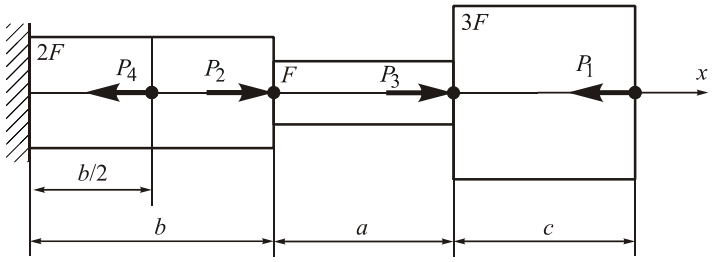
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 186 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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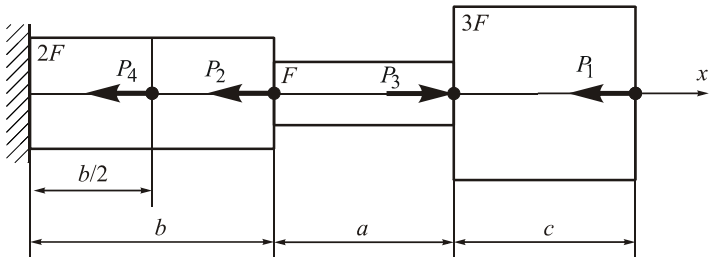
Full name of the student, group

Variant: 187 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

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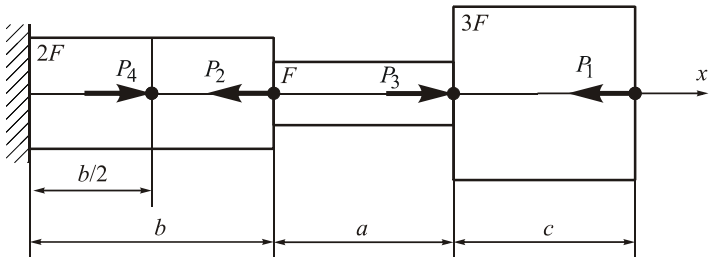
Variant: 188 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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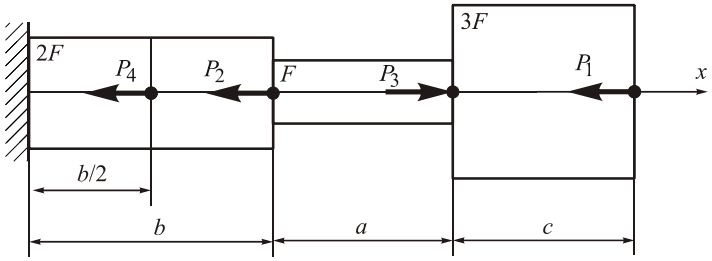
Full name of the student, group

Variant: 189 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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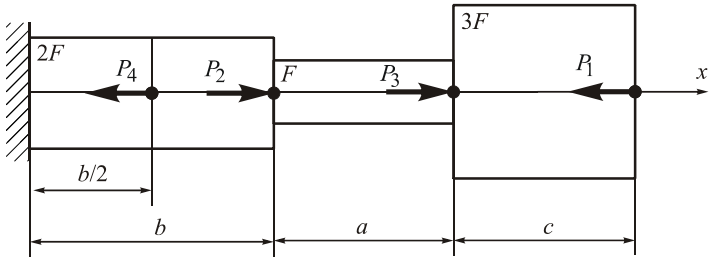
Full name of the student, group

Variant: 190 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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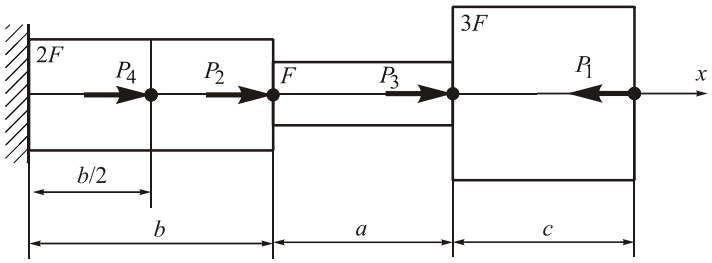
Full name of the student, group

Variant: 191 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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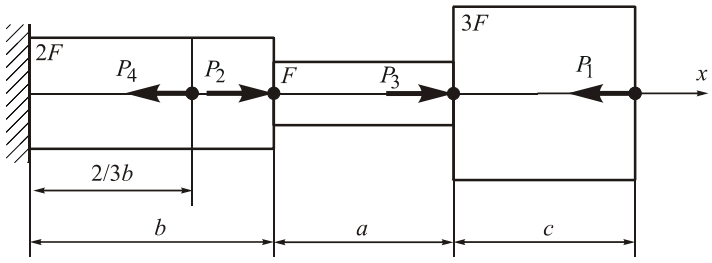
Full name of the student, group

Variant: 192 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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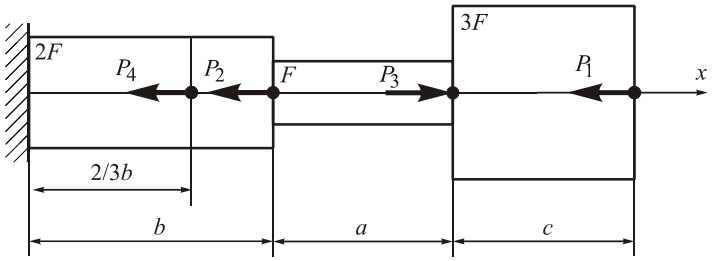
Full name of the student, group

Variant: 193 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Subject: mechanics of materials
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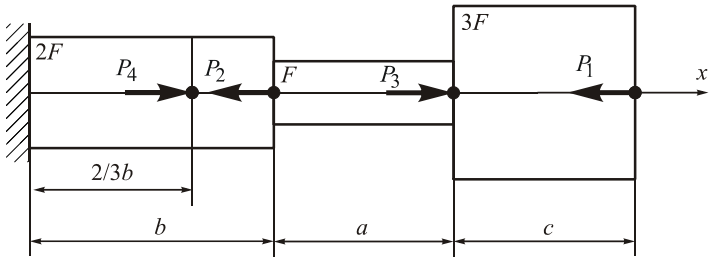
Full name of the student, group

Variant: 194 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Subject: mechanics of materials
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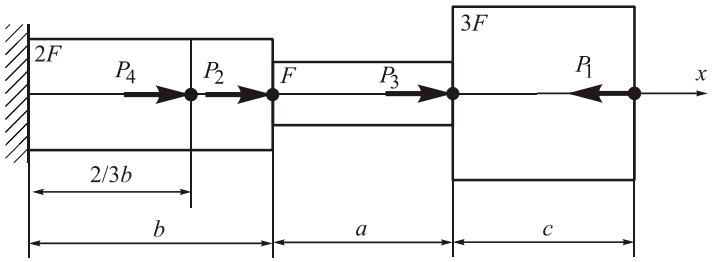
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 195 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Subject: mechanics of materials
Document: home problem
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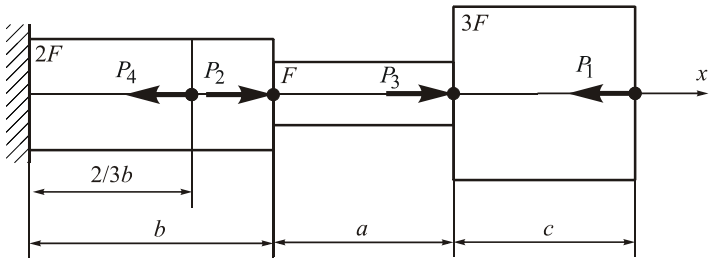
Full name of the student, group

Variant: 196 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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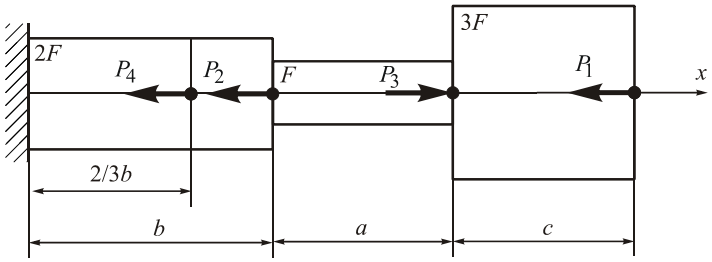
Variant: 197 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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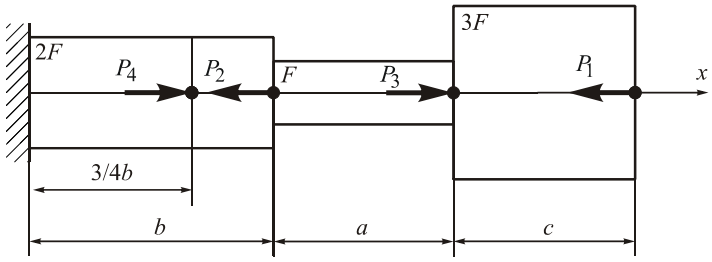
Variant: 198 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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Subject: mechanics of materials
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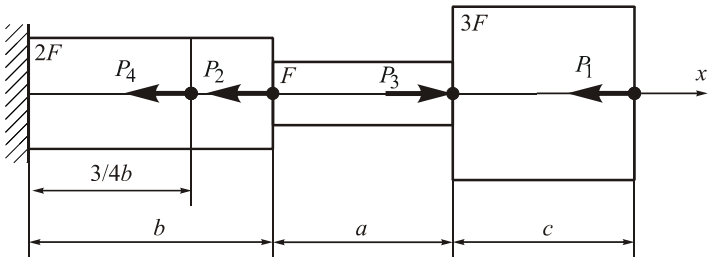
Variant: 199 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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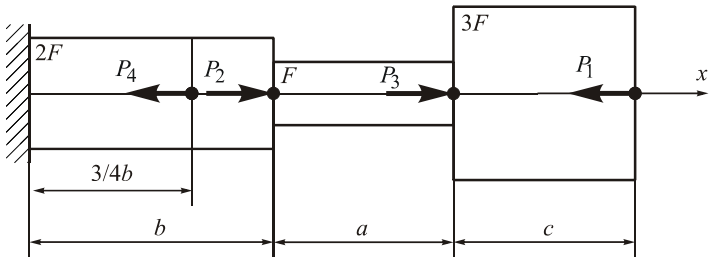
National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 200 **Complexity: 2**



Given: $P_1 = 30$ kN, $P_2 = 50$ kN, $P_3 = 80$ kN, $P_4 = 40$ kN,
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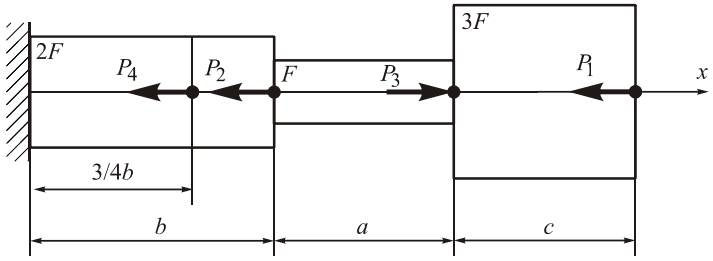
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 201 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
a = 3 m, b = 4 m, c = 5 m.

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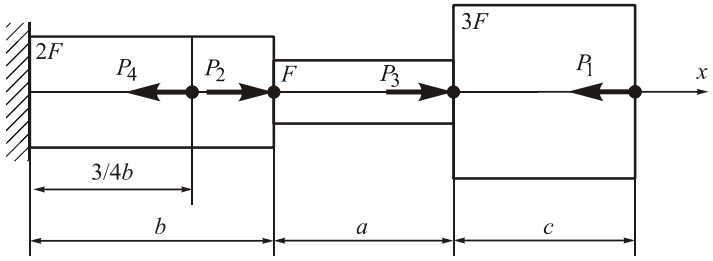
Full name of the student, group

Variant: 202 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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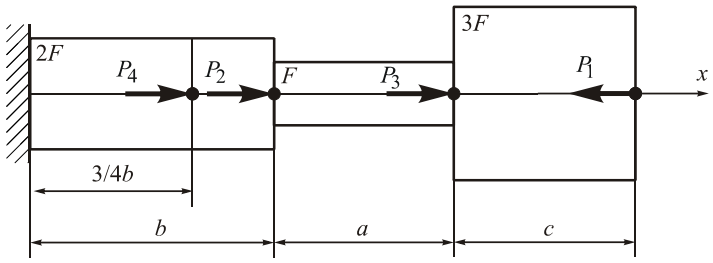
Full name of the student, group

Variant: 203 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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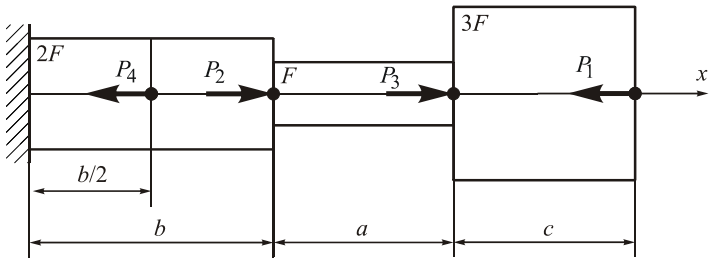
Full name of the student, group

Variant: 204 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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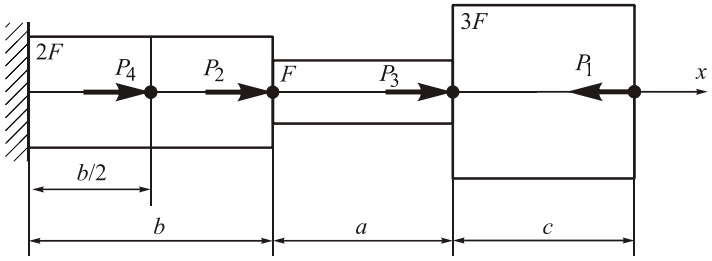
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 205 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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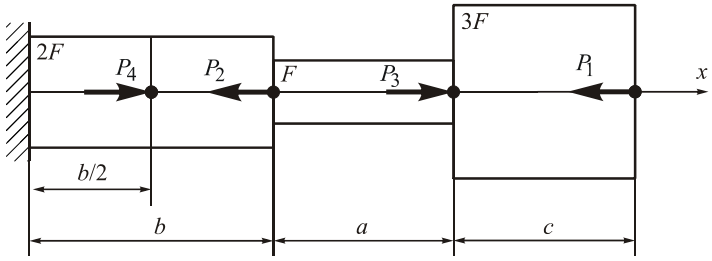
Full name of the student, group

Variant: 206 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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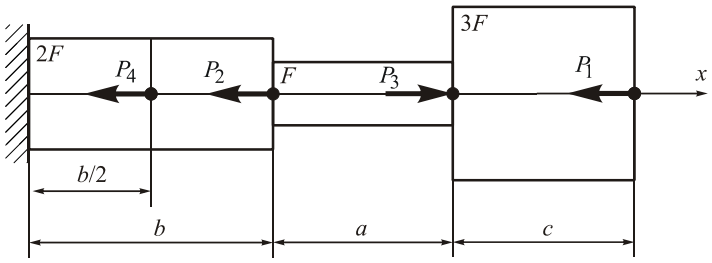
Full name of the student, group

Variant: 207 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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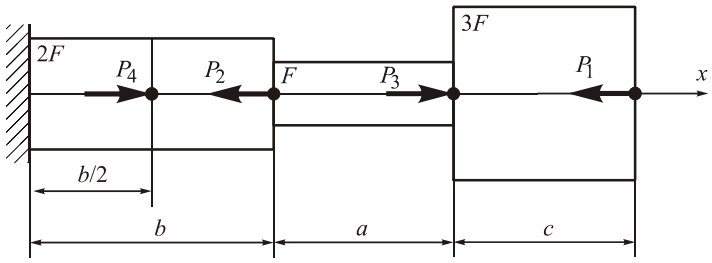
Variant: 208 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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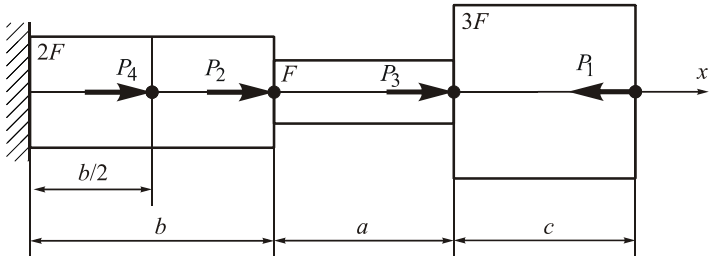
Variant: 209 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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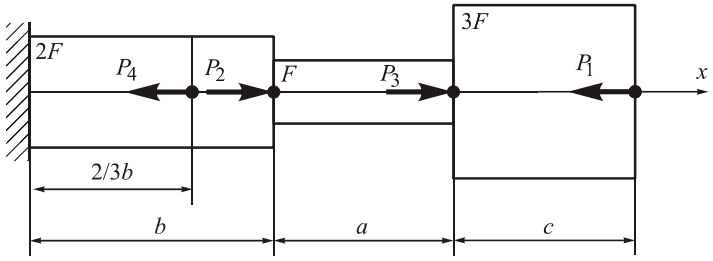
Variant: 210 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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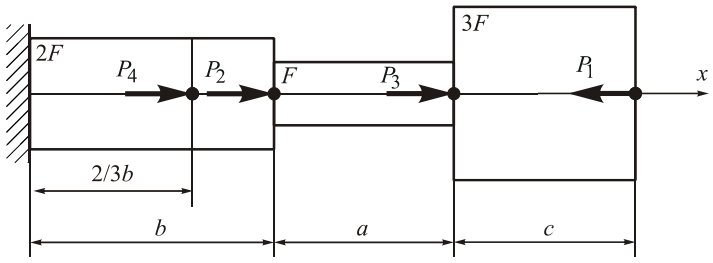
Variant: 211 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

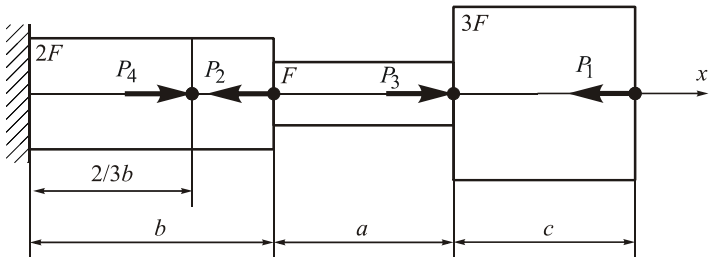
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 212 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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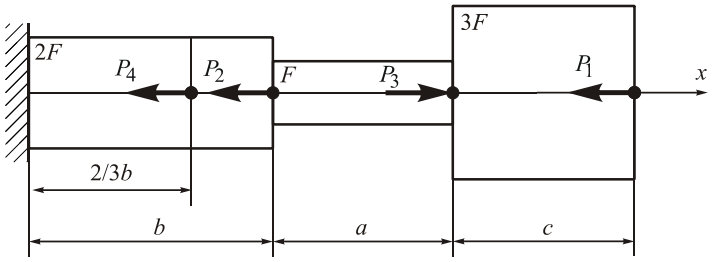
Variant: 213 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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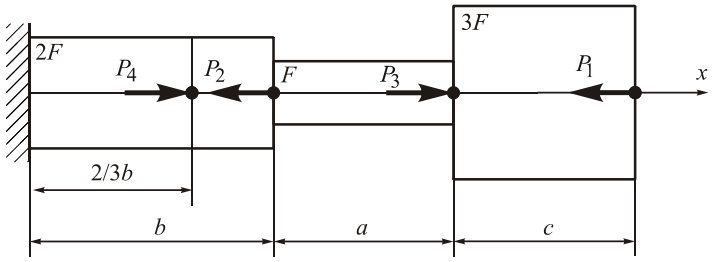
Variant: 214 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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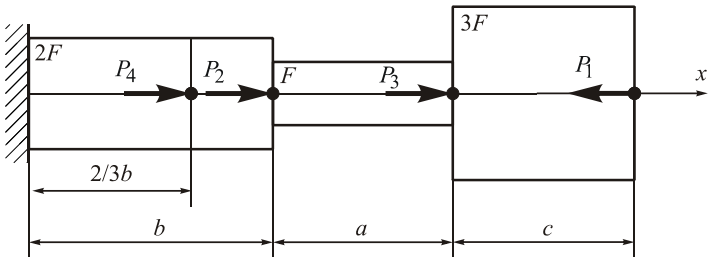
Variant: 215 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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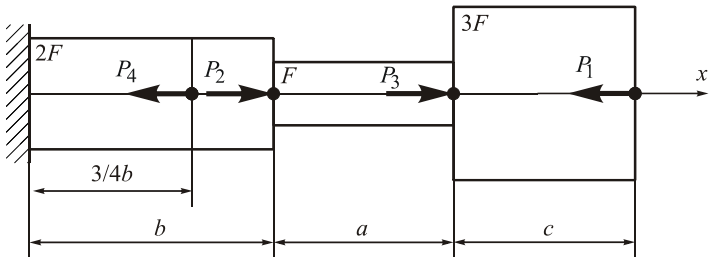
Variant: 216 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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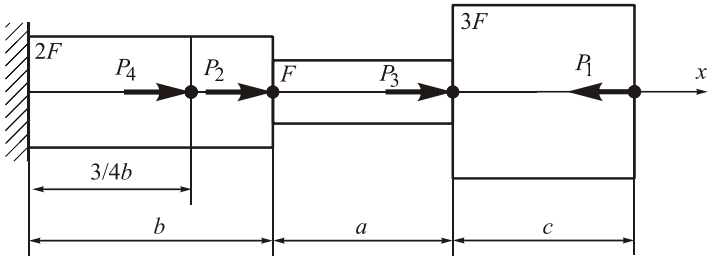
Variant: 217 **Complexity: 2**



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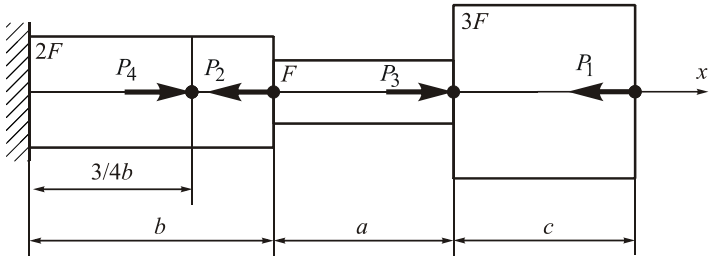
Variant: 218 **Complexity: 2**



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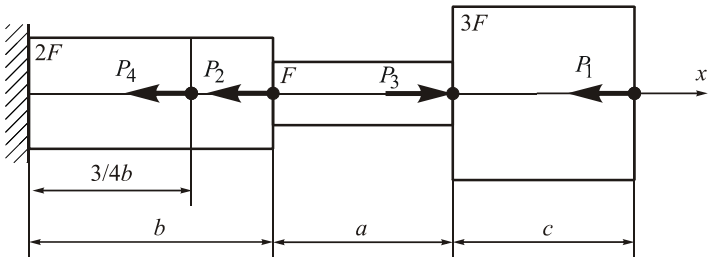
Variant: 219 **Complexity: 2**



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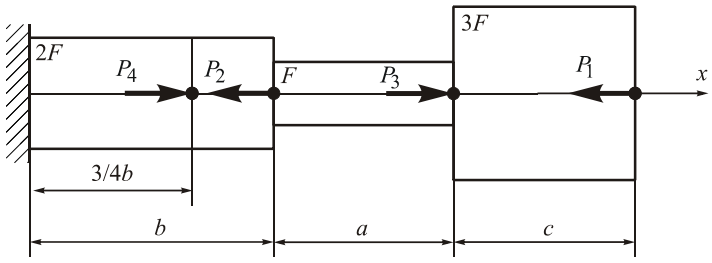
Variant: 220 **Complexity: 2**



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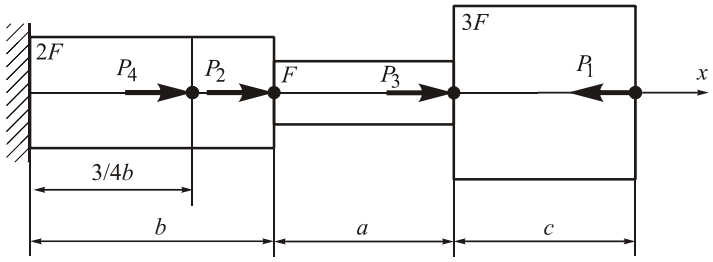
Variant: 221 **Complexity: 2**



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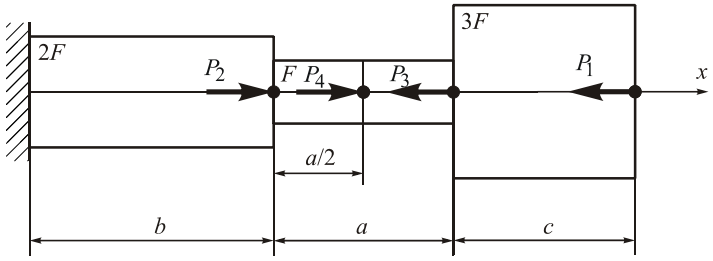
Variant: 222 **Complexity: 2**



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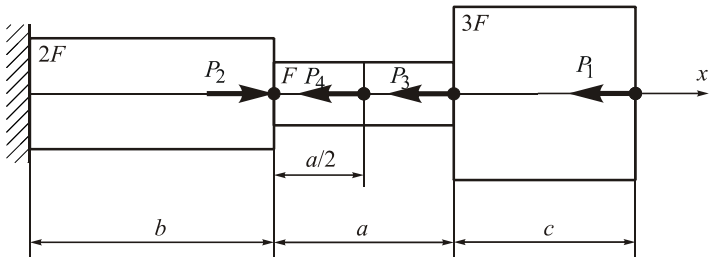
Variant: 223 **Complexity: 2**



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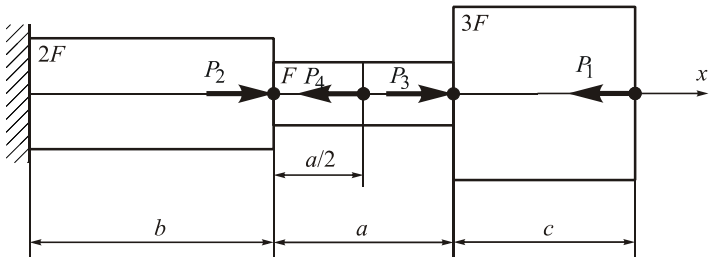
Variant: 224 **Complexity: 2**



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Subject: mechanics of materials
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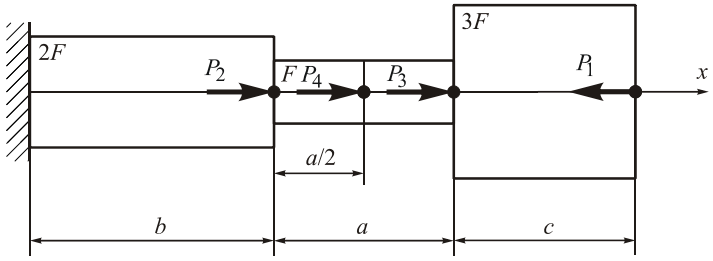
Full name of the student, group

Variant: 225 **Complexity: 2**



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Subject: mechanics of materials
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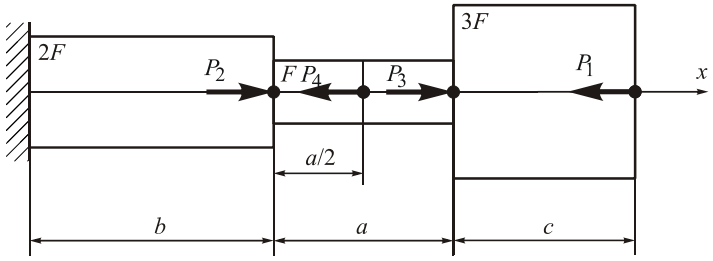
Full name of the student, group

Variant: 226 **Complexity: 2**



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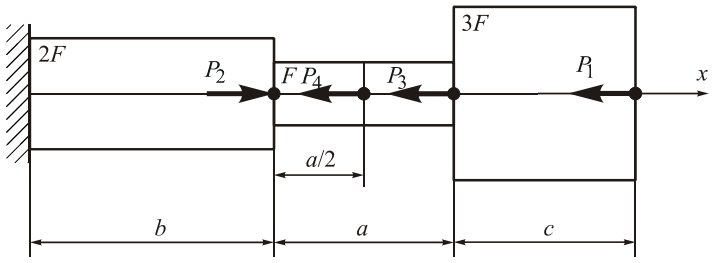
Variant: 227 **Complexity: 2**



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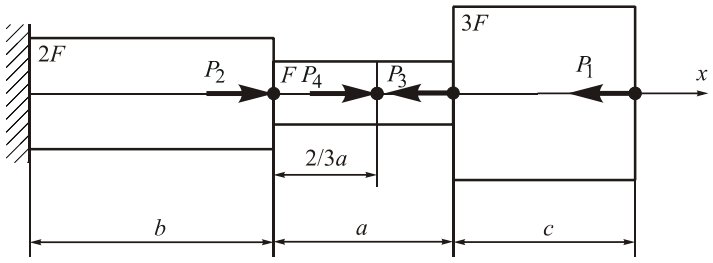
Variant: 228 **Complexity: 2**



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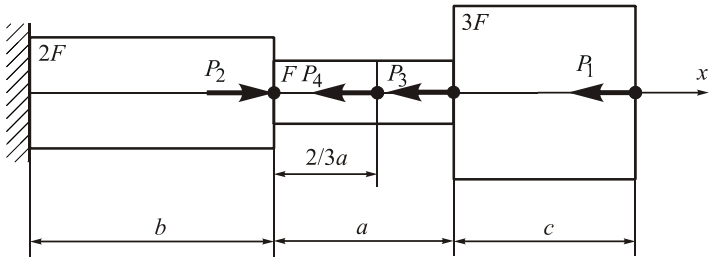
Variant: 229 **Complexity: 2**



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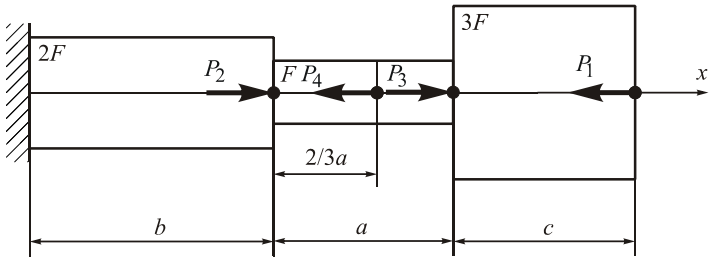
Variant: 230 **Complexity: 2**



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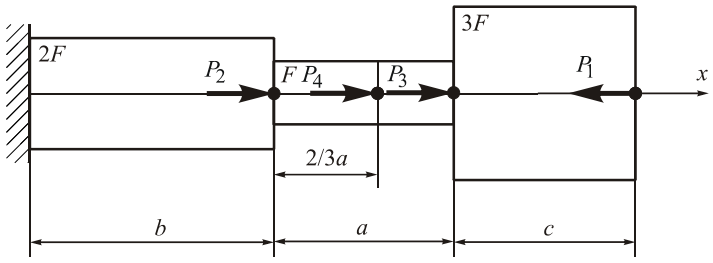
Variant: 231 **Complexity: 2**



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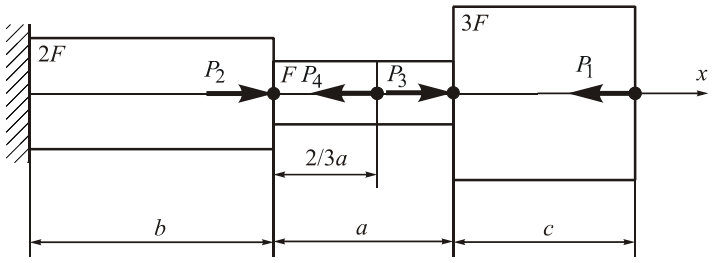
Variant: 232 **Complexity: 2**



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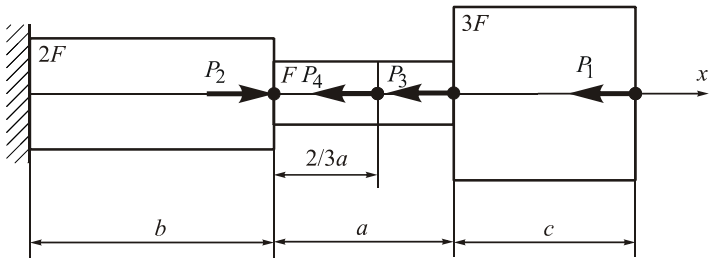
Variant: 233 **Complexity: 2**



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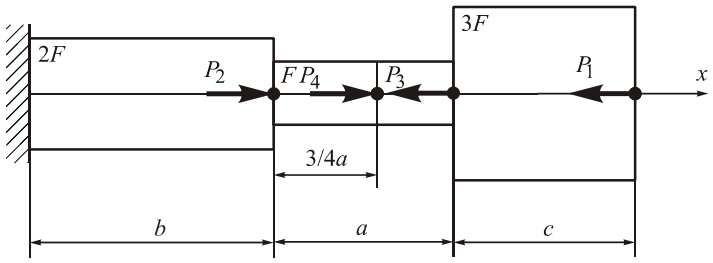
Variant: 234 **Complexity: 2**



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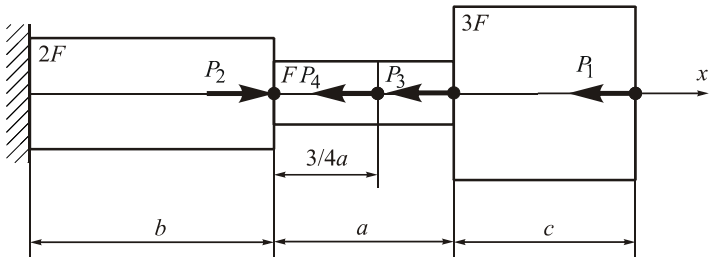
Variant: 235 **Complexity: 2**



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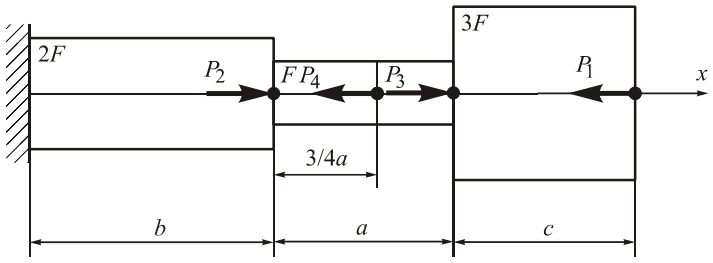
Variant: 236 **Complexity: 2**



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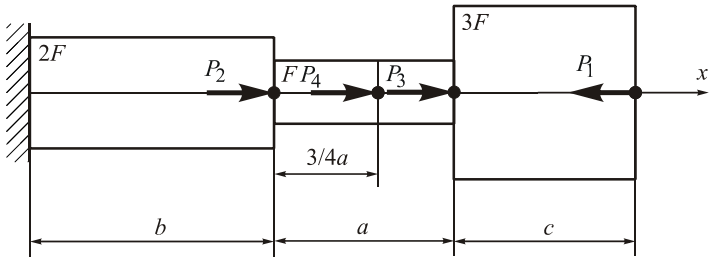
Variant: 237 **Complexity: 2**



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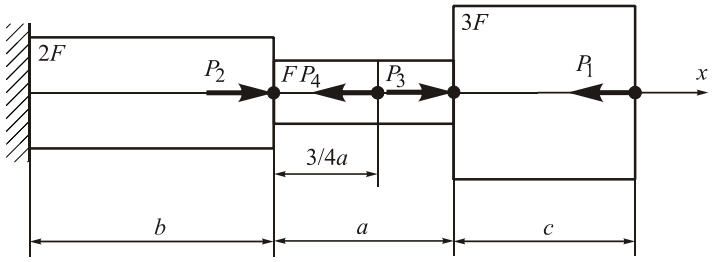
Full name of the student, group

Variant: 238 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
a = 3 m, b = 4 m, c = 5 m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

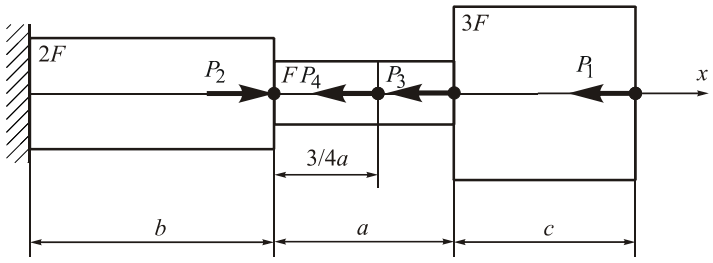
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 239 **Complexity: 2**



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Subject: mechanics of materials
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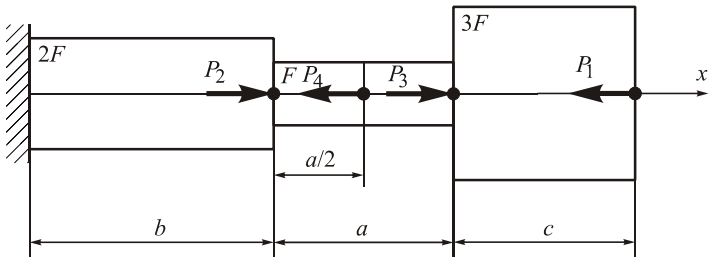
Full name of the student, group

Variant: 240 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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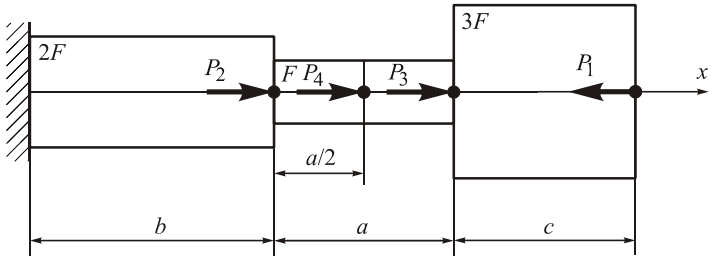
Full name of the student, group

Variant: 241 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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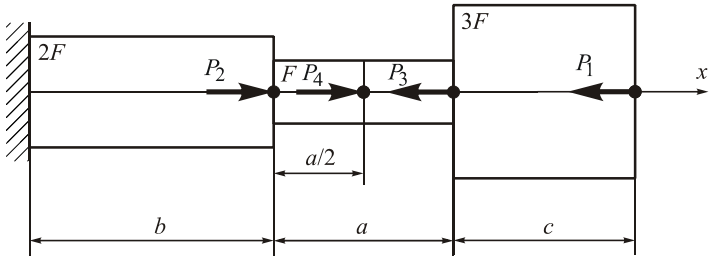
Full name of the student, group

Variant: 242 **Complexity: 2**



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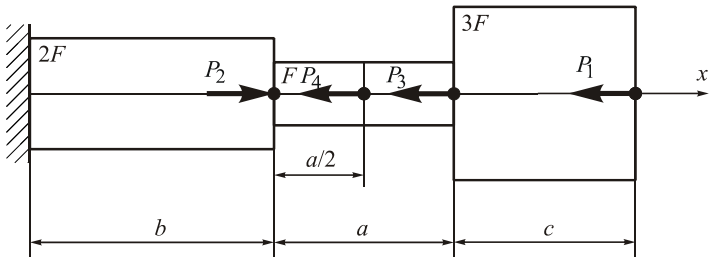
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 243 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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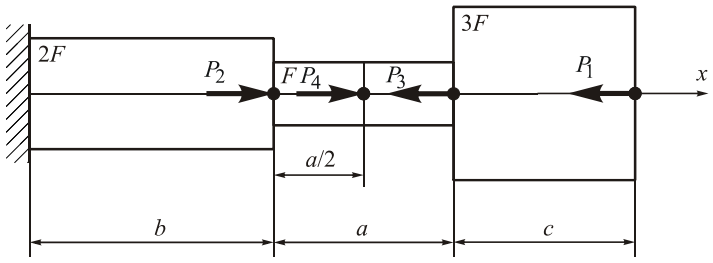
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 244 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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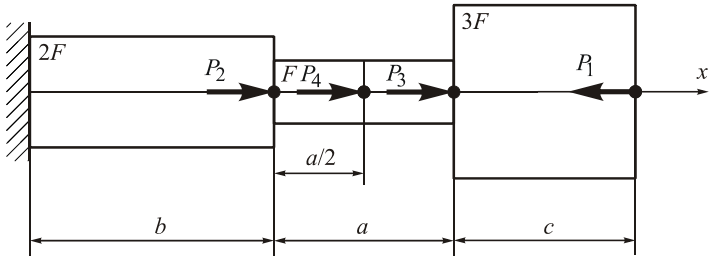
Variant: 245 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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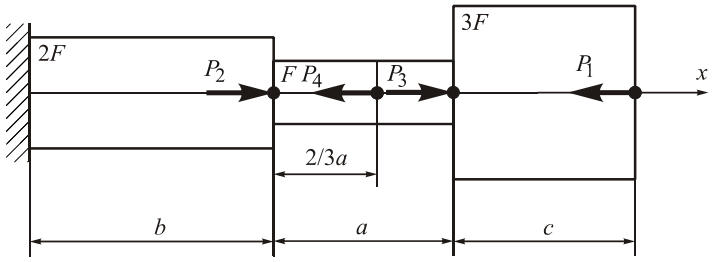
Full name of the student, group

Variant: 246 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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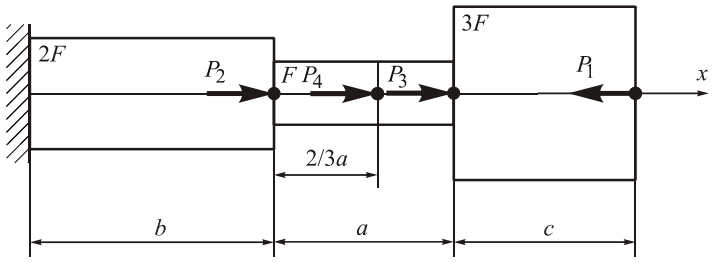
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 247 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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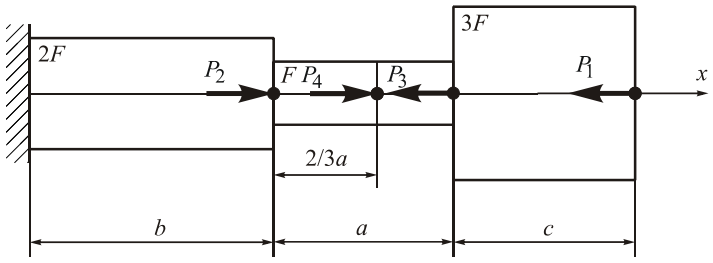
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 248 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
Document: home problem
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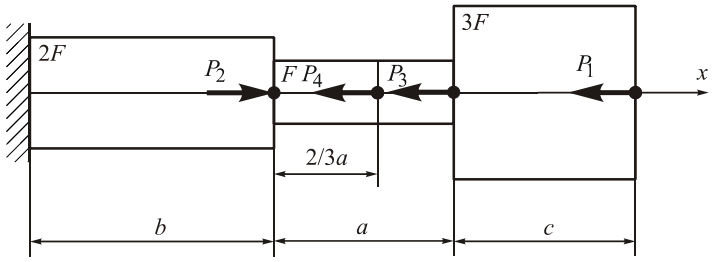
Full name of the student, group

Variant: 249 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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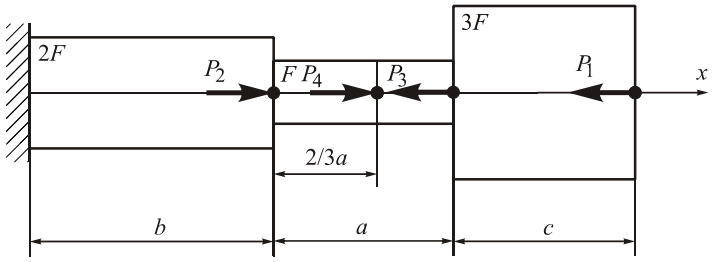
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 250 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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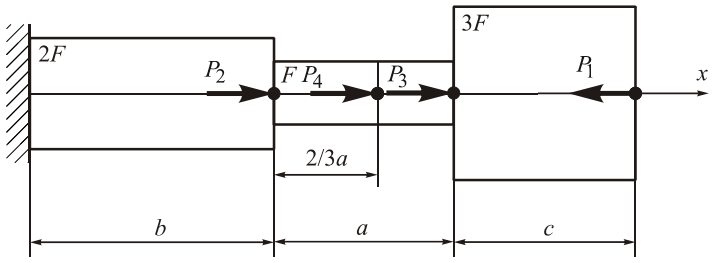
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 251 **Complexity: 2**



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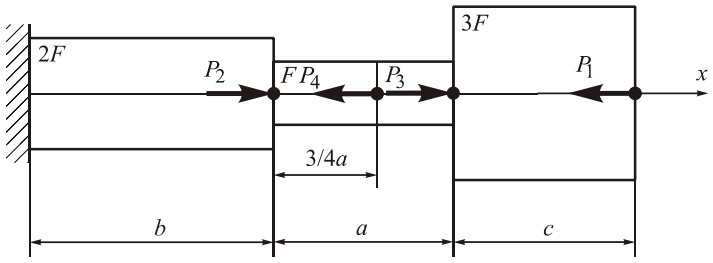
Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 252 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
Document: home problem
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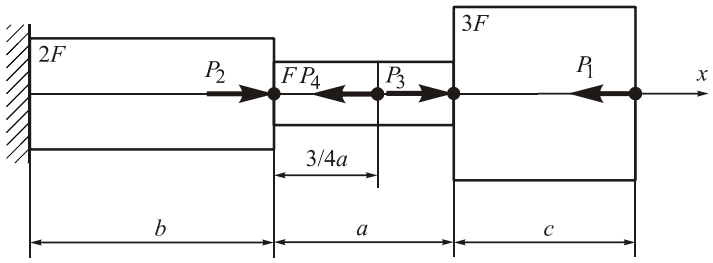
Full name of the student, group

Variant: 253 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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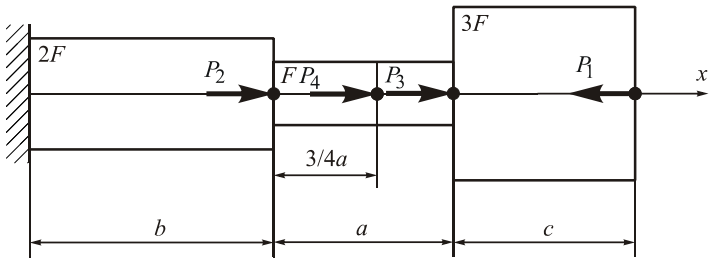
Full name of the student, group

Variant: 254 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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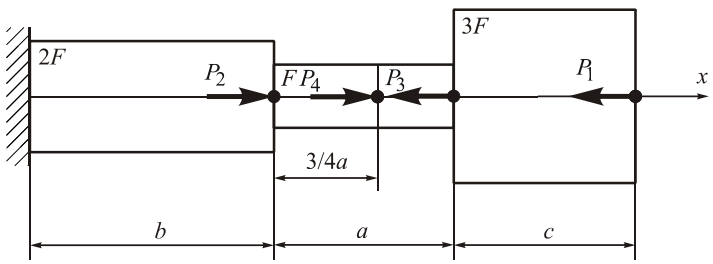
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 255 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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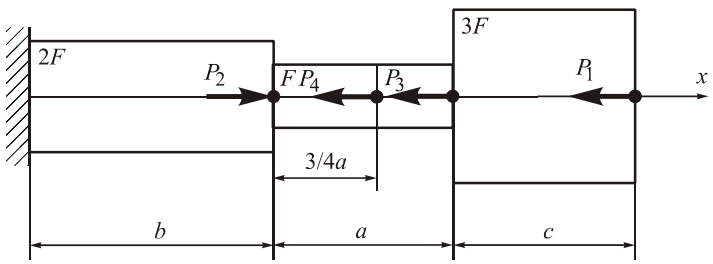
Variant: 256 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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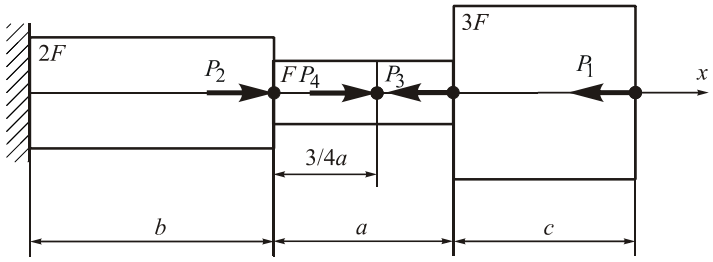
Full name of the student, group

Variant: 257 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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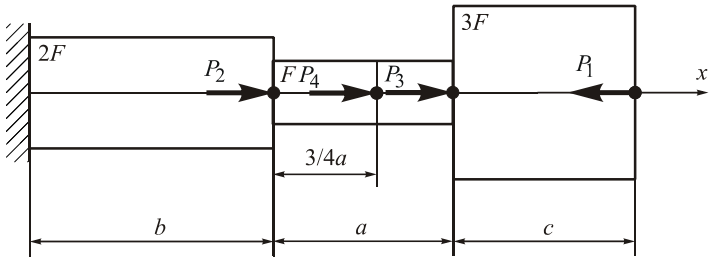
Full name of the student, group

Variant: 258 **Complexity: 2**



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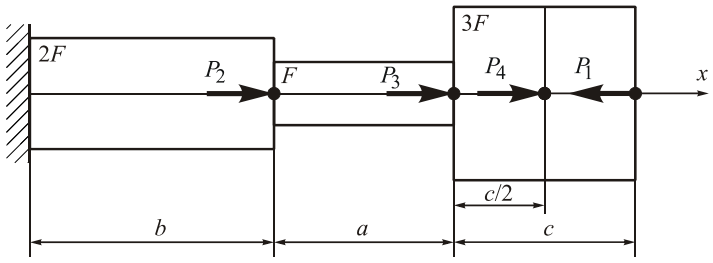
Full name of the student, group

Variant: 259 **Complexity: 2**



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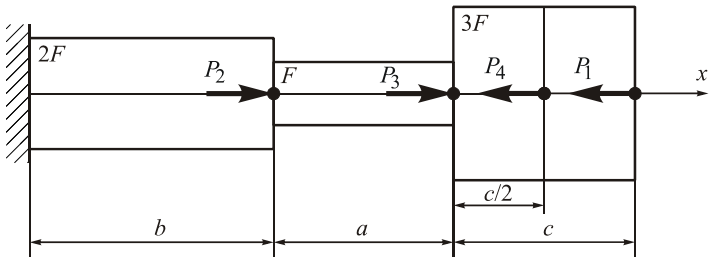
Full name of the student, group

Variant: 260 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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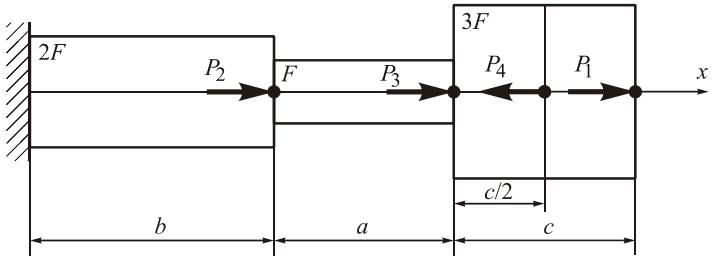
Full name of the student, group

Variant: 261 **Complexity: 2**



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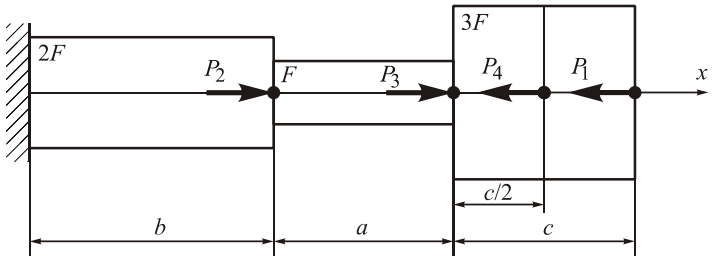
Full name of the student, group

Variant: 262 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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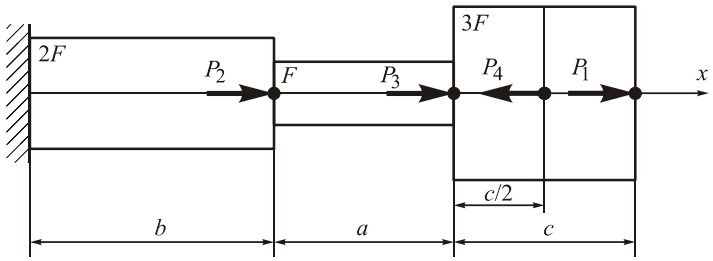
Full name of the student, group

Variant: 263 **Complexity: 2**



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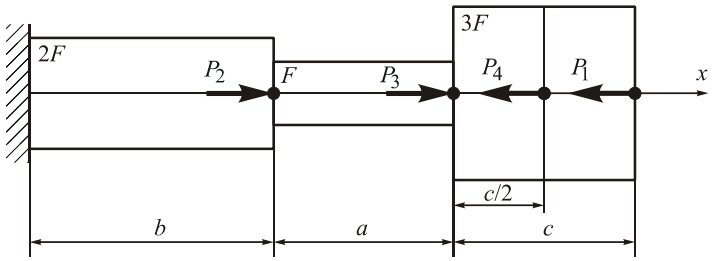
Variant: 264 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

Full name of the lecturer **signature**

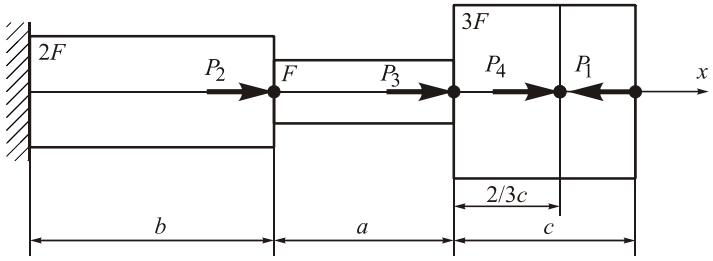
Mark:

National aerospace university
"Kharkiv Aviation Institute"
Department of aircraft strength

Subject: mechanics of materials
Document: home problem
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 265 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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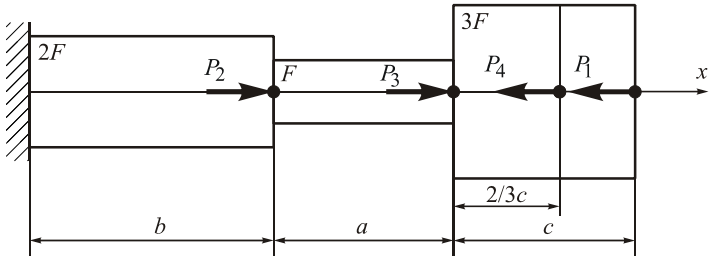
Variant: 266 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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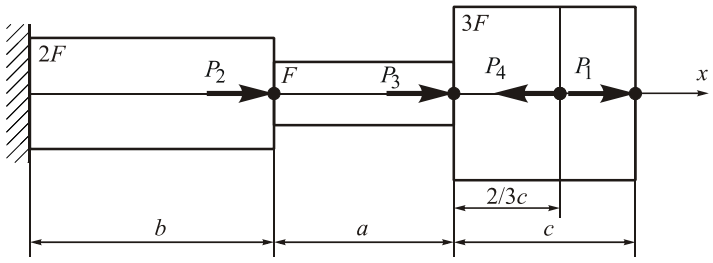
Variant: 267 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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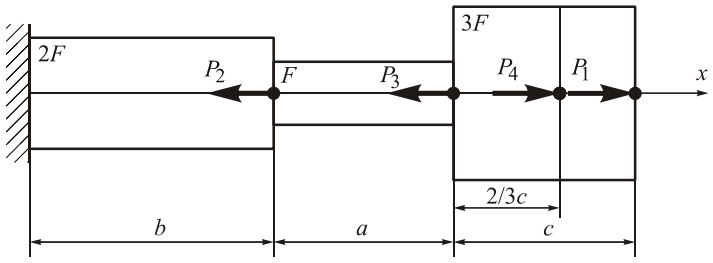
Variant: 268 **Complexity: 2**



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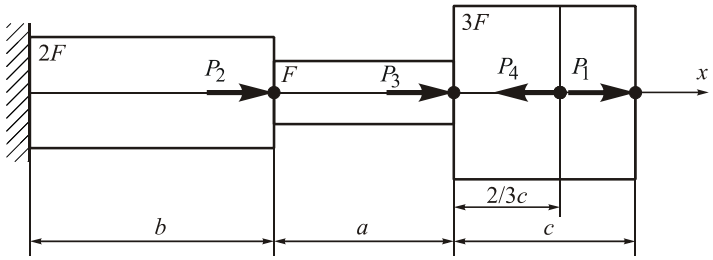
Variant: 269 **Complexity: 2**



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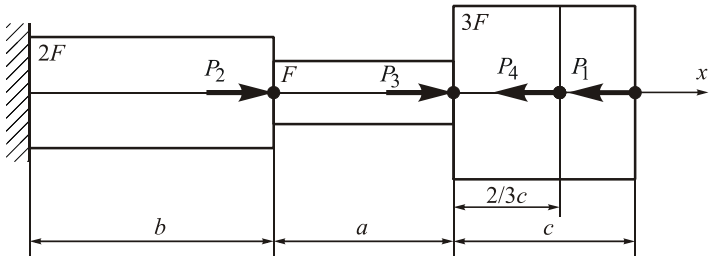
Full name of the student, group

Variant: 270 **Complexity: 2**



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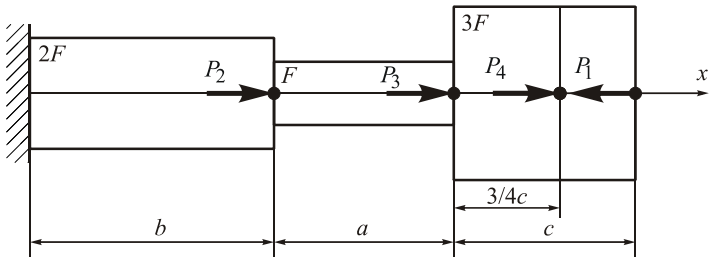
Variant: 271 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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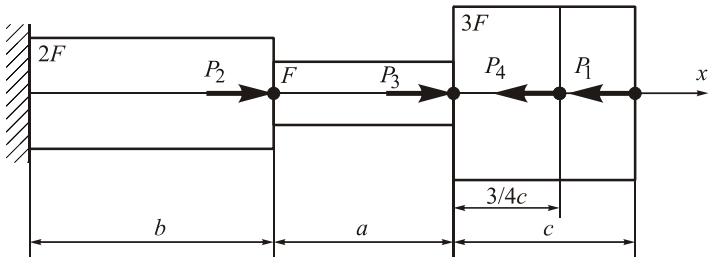
Variant: 272 **Complexity: 2**



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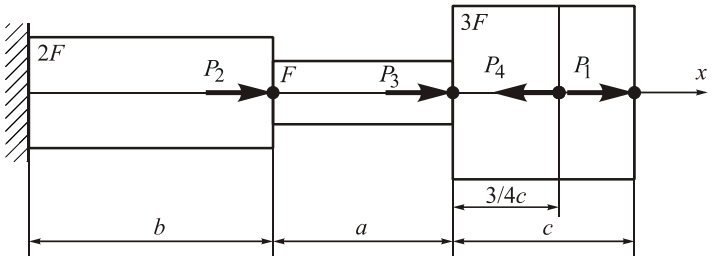
Full name of the student, group

Variant: 273 **Complexity: 2**



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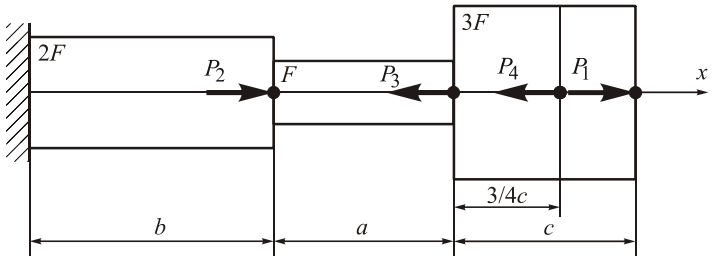
Full name of the student, group

Variant: 274 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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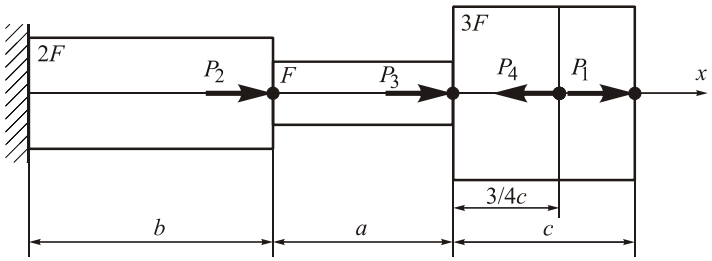
Full name of the student, group

Variant: 275 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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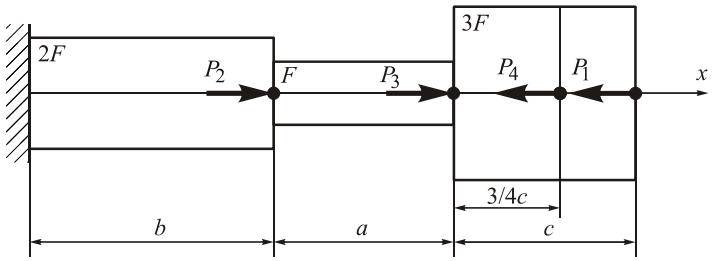
Variant: 276 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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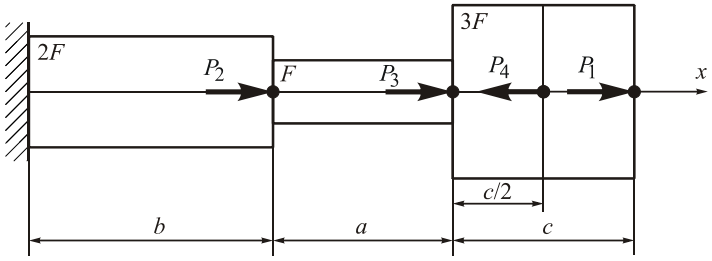
Variant: 277 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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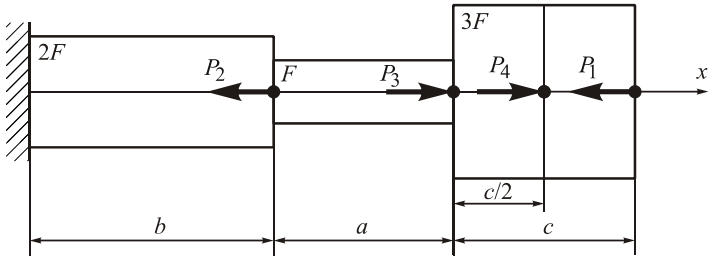
Full name of the student, group

Variant: 278 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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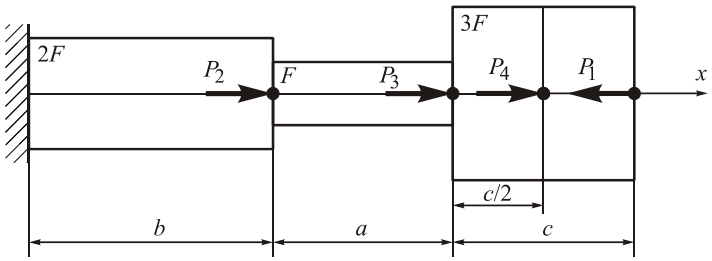
Variant: 279 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
Document: home problem
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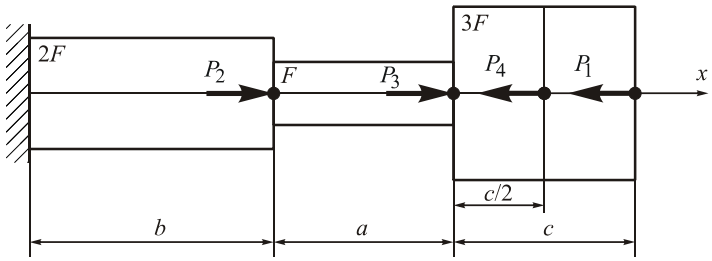
Full name of the student, group

Variant: 280 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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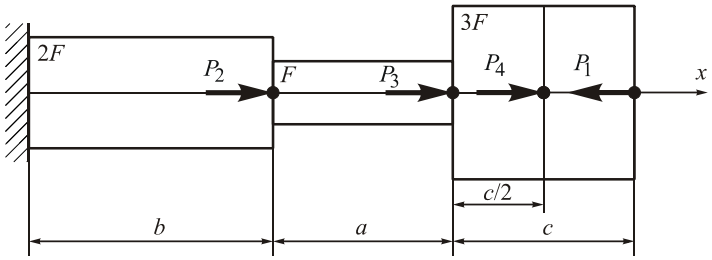
Full name of the student, group

Variant: 281 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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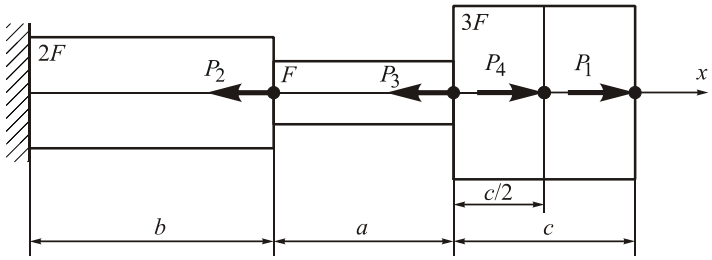
Variant: 282 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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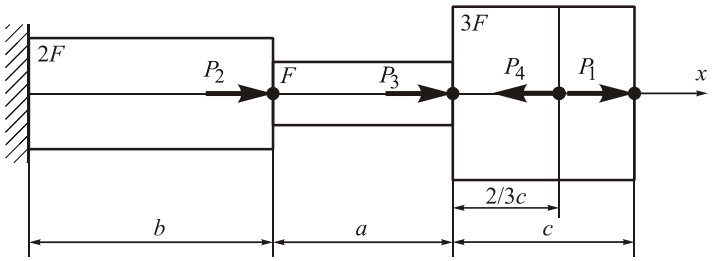
Variant: 283 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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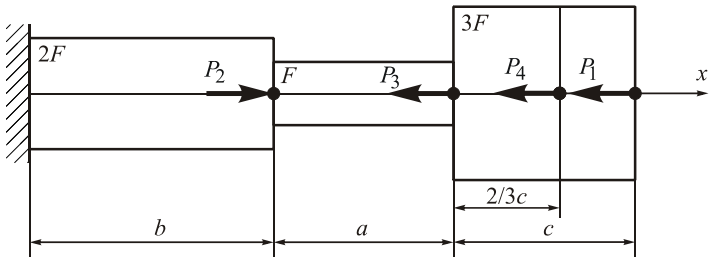
Variant: 284 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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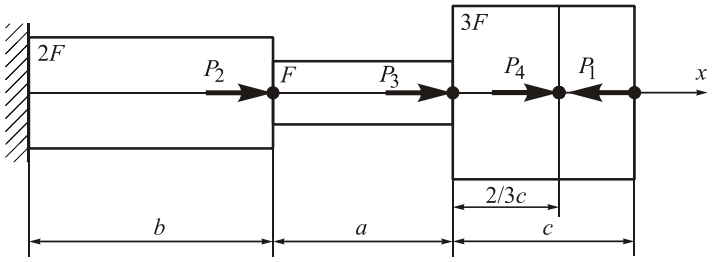
Full name of the student, group

Variant: 285 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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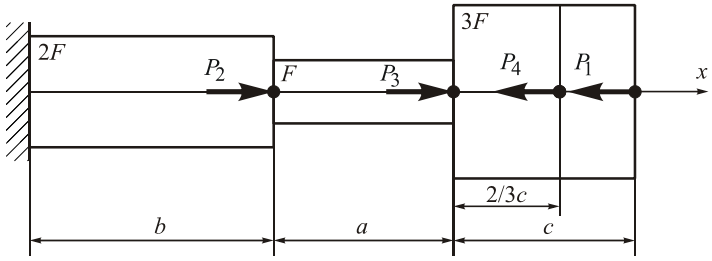
Variant: 286 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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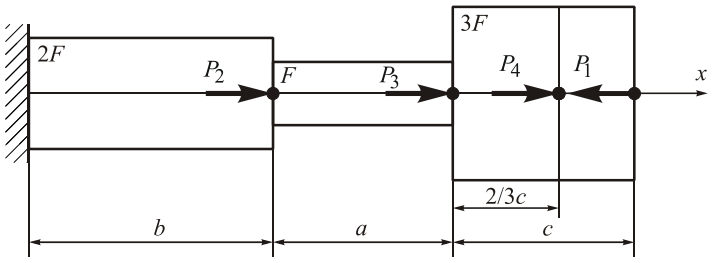
Variant: 287 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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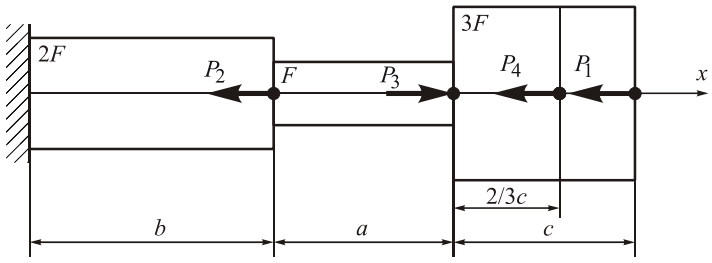
Variant: 288 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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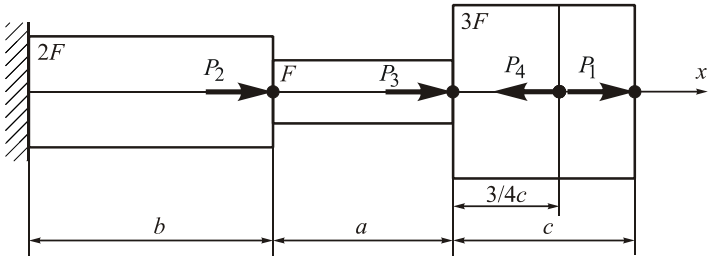
Variant: 289 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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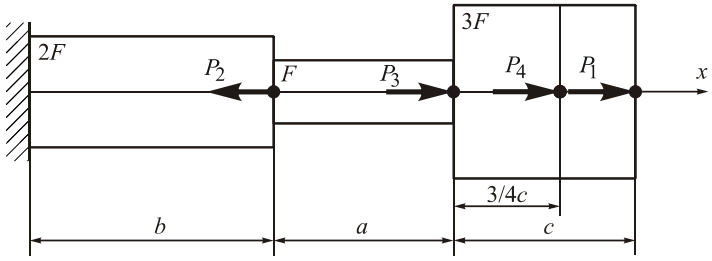
Variant: 290 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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Subject: mechanics of materials
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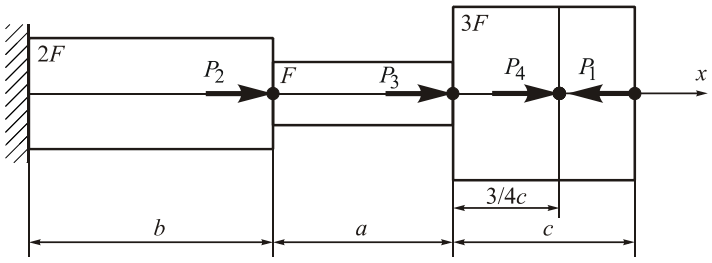
Topic: graphs of normal force distribution in tension-compression of a rod

Full name of the student, group

Variant: 291 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
$a = 3$ m, $b = 4$ m, $c = 5$ m.

Goal: obtain equations of normal force in cross-sections of a rod and draw the graphs of its distribution along the length of a rod.

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Department of aircraft strength

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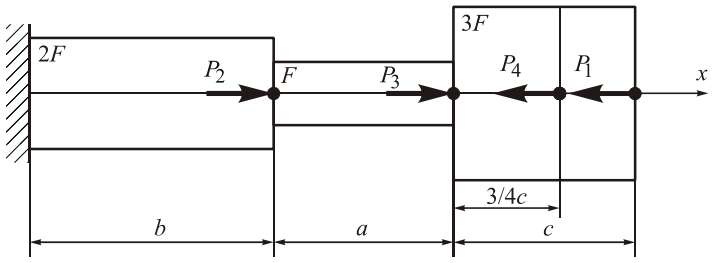
Variant: 292 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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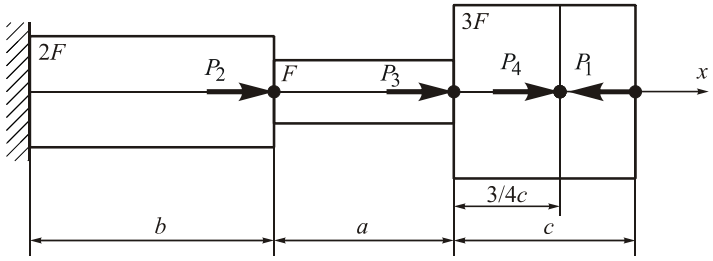
Variant: 293 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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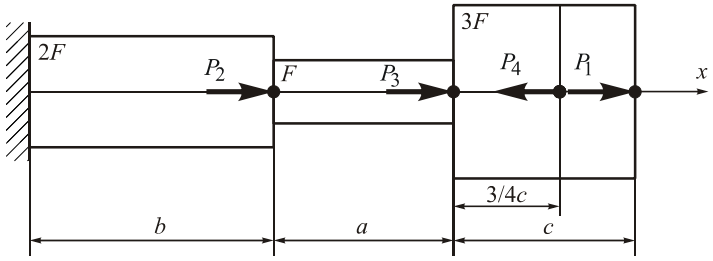
Variant: 294 **Complexity: 2**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN, $P_4 = 60$ kN,
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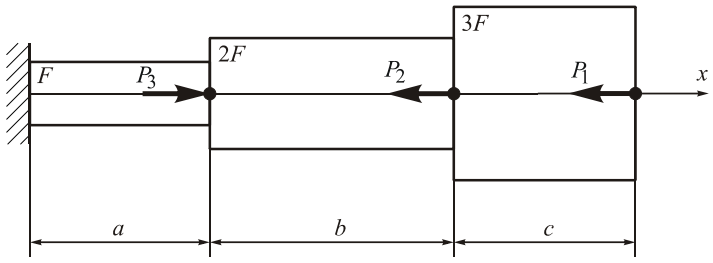
Variant: 295 **Complexity: 1**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN,
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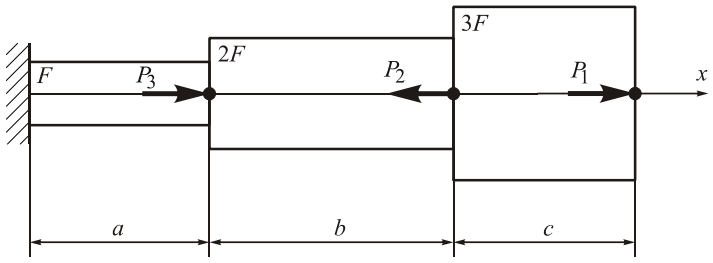
Variant: 296 **Complexity: 1**



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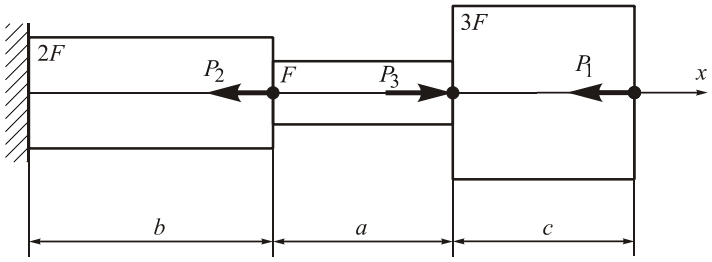
Variant: 297 **Complexity: 1**



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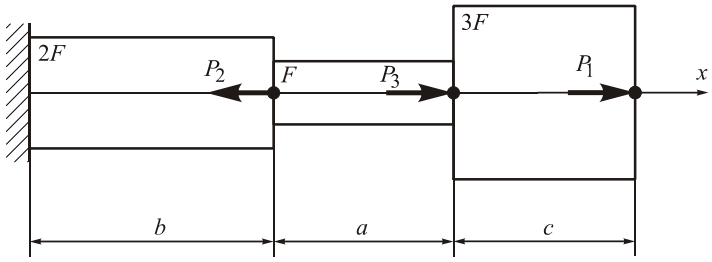
Variant: 298 **Complexity: 1**



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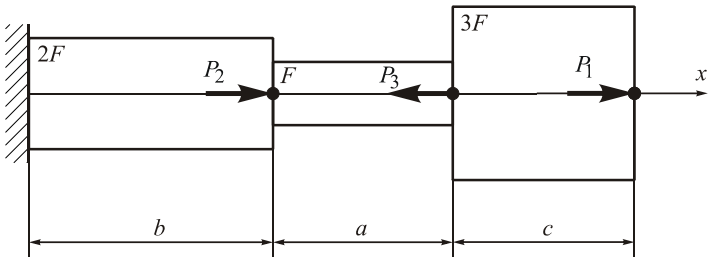
Variant: 299 **Complexity: 1**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN,
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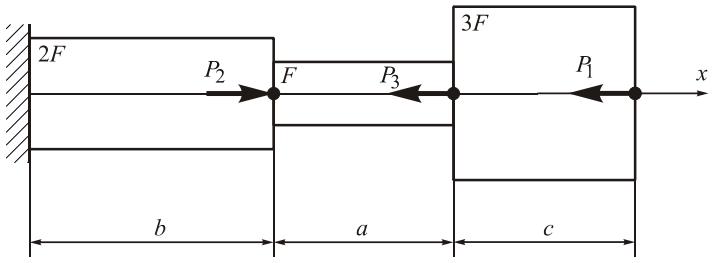
Variant: 300 **Complexity: 1**



Given: $P_1 = 40$ kN, $P_2 = 60$ kN, $P_3 = 120$ kN,
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