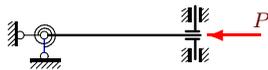


## Устойчивость стержня на упругих опорах

Прямолинейный стержень длиной  $l$ , закрепленный на одном конце в упругой опоре, сжимается продольной силой  $P$ . Задана относительная жесткость для линейного смещения  $\Delta y$  опоры  $a = EJ/(c_1 l^3)$ , где  $c_1$  — жесткость пружины ( $N_{\text{упр}} = c_1 \Delta y$ , ) или относительная жесткость для углового смещения  $\Delta \varphi$   $b = EJ/(c_2 l)$ , где  $c_2$  — жесткость пружины ( $M_{\text{упр}} = c_2 \Delta \varphi$ . ) Определить коэффициент  $\mu$  приведения длины стержня.

**Задача 33.1.**

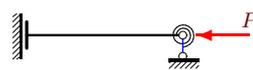
3



$$b = 0.048$$

**Задача 33.2.**

3



$$b = 0.357$$

**Задача 33.3.**

3



$$a = 0.189$$

**Задача 33.4.**

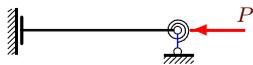
3



$$b = 0.219$$

**Задача 33.5.**

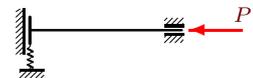
3



$$b = 0.505$$

**Задача 33.6.**

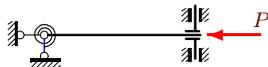
3



$$a = 0.034$$

**Задача 33.7.**

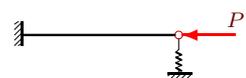
3



$$b = 0.726$$

**Задача 33.8.**

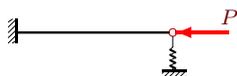
3



$$a = 0.230$$

**Задача 33.9.**

3



$$a = 0.376$$

**Задача 33.10.**

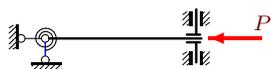
3



$$b = 0.372$$

**Задача 33.11.**

3



$$b = 1.095$$

**Задача 33.12.**

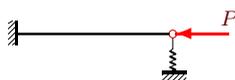
3



$$a = 0.061$$

**Задача 33.13.**

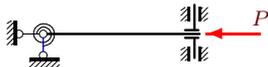
3



$$a = 0.117$$

**Задача 33.14.**

3



$$b = 1.095$$

**Задача 33.15.**

3



$$a = 0.047$$

**Задача 33.16.**

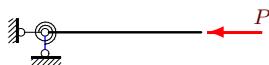
3



$$a = 0.094$$

**Задача 33.17.**

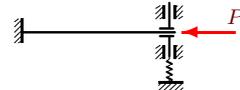
3



$$b = 48.706$$

**Задача 33.18.**

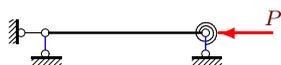
3



$$a = 0.040$$

**Задача 33.19.**

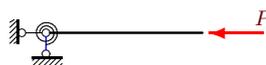
3



$$b = 0.104$$

**Задача 33.20.**

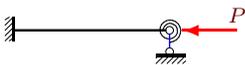
3



$$b = 11.925$$

**Задача 33.21.**

3



$$b = 0.091$$

**Задача 33.22.**

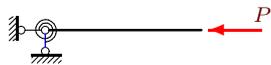
3



$$b = 1.095$$

**Задача 33.23.**

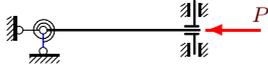
3



$$b = 1.011$$

**Задача 33.24.**

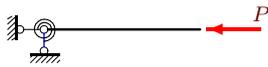
3



$$b = 0.726$$

Задача 33.25.

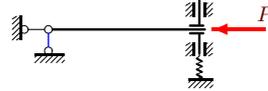
3



$$b = 11.925$$

Задача 33.26.

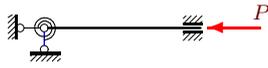
3



$$a = 0.047$$

Задача 33.27.

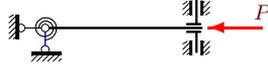
3



$$b = 0.134$$

Задача 33.28.

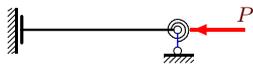
3



$$b = 0.103$$

Задача 33.29.

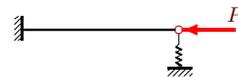
3



$$b = 1.095$$

Задача 33.30.

3



$$a = 0.135$$

Задача 33.31.

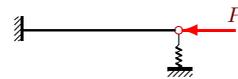
3



$$b = 0.372$$

Задача 33.32.

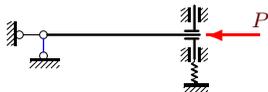
3



$$a = 1.723$$

Задача 33.33.

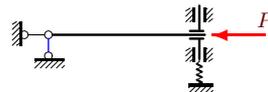
3



$$a = 0.129$$

Задача 33.34.

3



$$a = 0.252$$

**Устойчивость стержня на упругих опорах**

№	$\mu$
1	1.048
2	1.294
3	1.222
4	0.810
5	1.375
6	0.550
7	1.467
8	1.294
9	1.467
10	0.611
11	1.571
12	0.850
13	1.048
14	1.571
15	0.611
16	0.733
17	22.000
18	0.579
19	0.762
20	11.000
21	0.542
22	1.571
23	3.667
24	1.467
25	11.000
26	0.793
27	0.558
28	1.100
29	1.571
30	1.100
31	0.611
32	1.833
33	1.084
34	1.327