

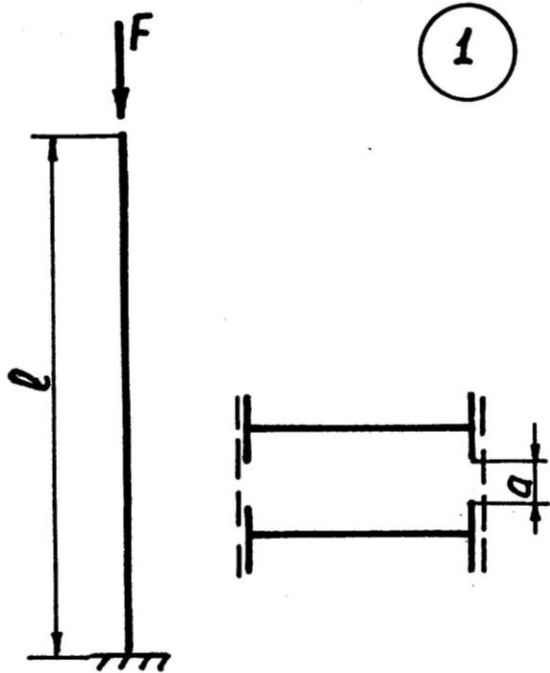
РАСЧЕТНО-ПРОЕКТИРОВОЧНАЯ РАБОТА N 7

Расчет на устойчивость центрально сжатой составной колонны

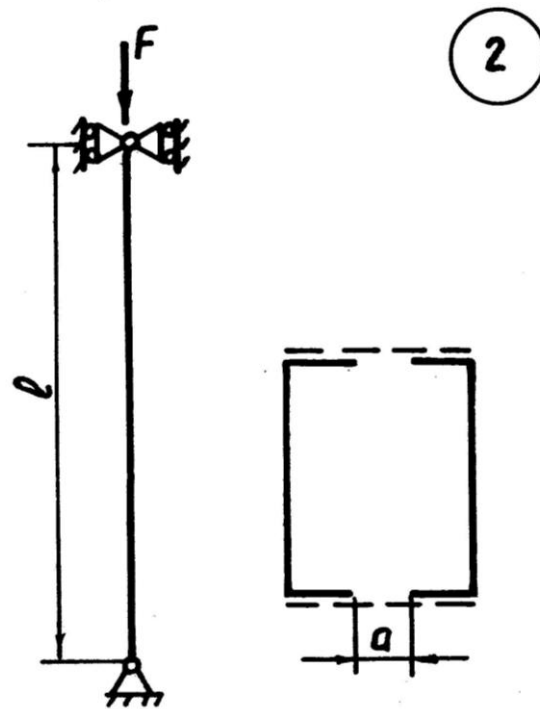
Задание:

Для расчета составной колонны необходимо определить:

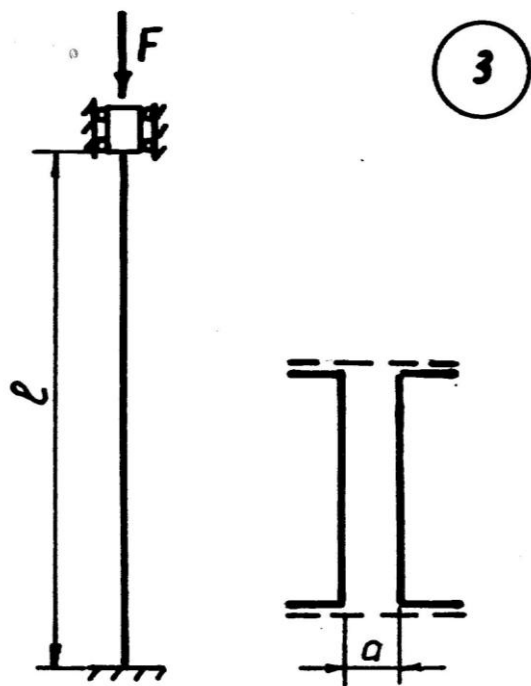
1. Номер прокатного профиля;
2. Расстояние между соединительными планками колонны;
3. Расстояние между элементами колонны;
4. Допускаемую нагрузку на колонну для всех возможных способов закрепления её концов (материал колонны – Ст 3, $\sigma_{adm} = 160 \text{ МПа}$).



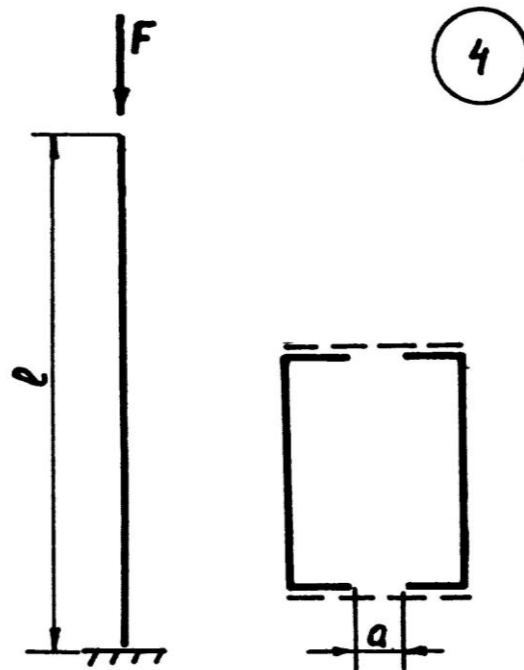
$$F = 300 \text{ кН}; \quad l = 4,0 \text{ м.}$$



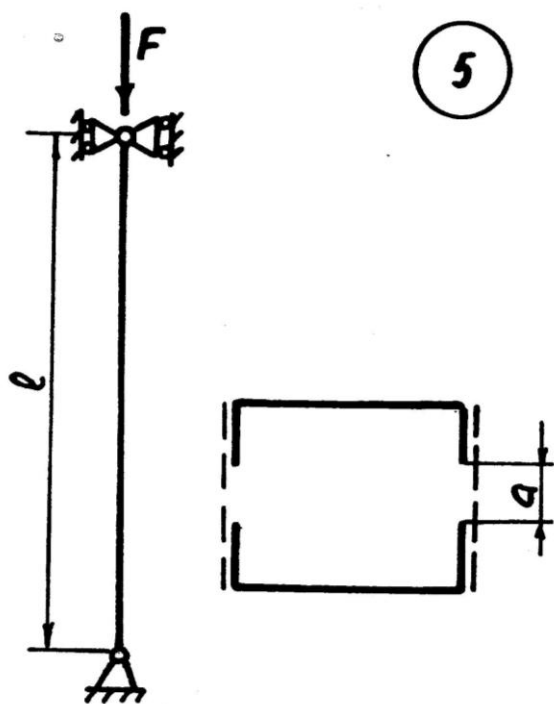
$$F = 700 \text{ кН}; \quad l = 6,0 \text{ м.}$$



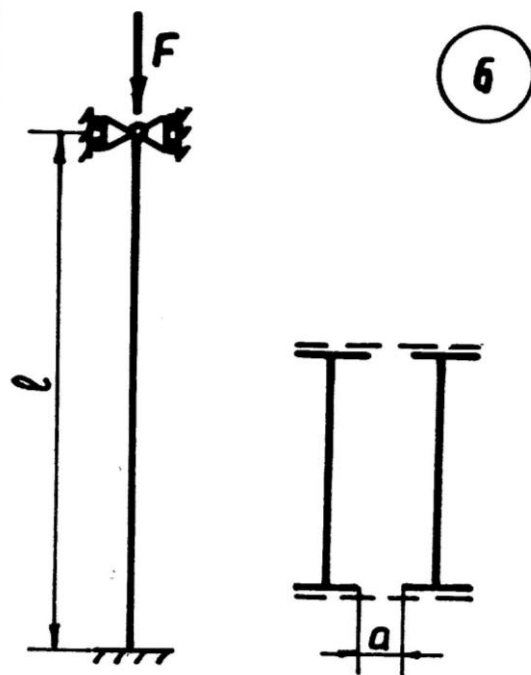
$$F = 1050 \text{ кН}; \quad l = 5,4 \text{ м.}$$



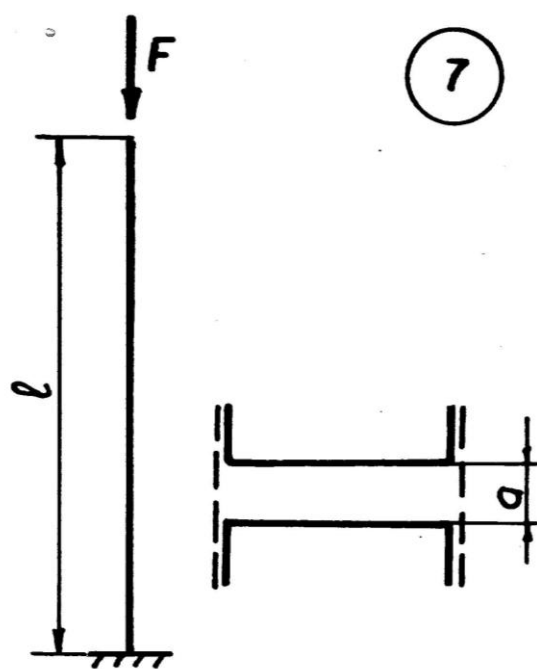
$$F = 420 \text{ кН}; \quad l = 3,5 \text{ м.}$$



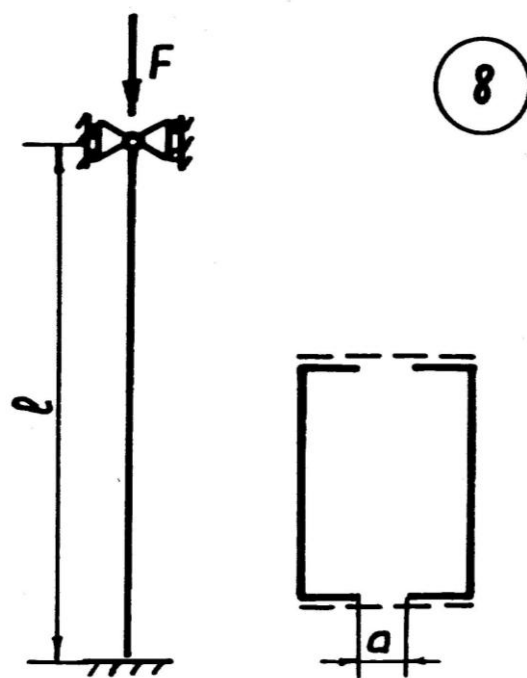
$$F = 560 \text{ кН}; \quad l = 4,8 \text{ м.}$$



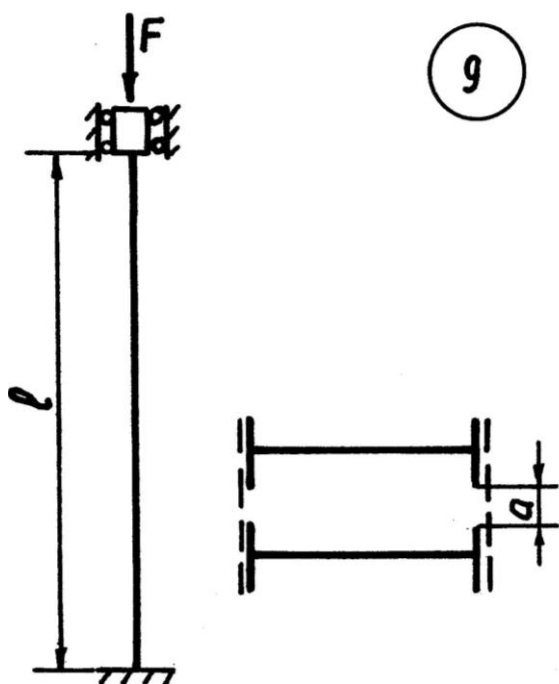
$$F = 820 \text{ кН}; \quad l = 7,0 \text{ м.}$$



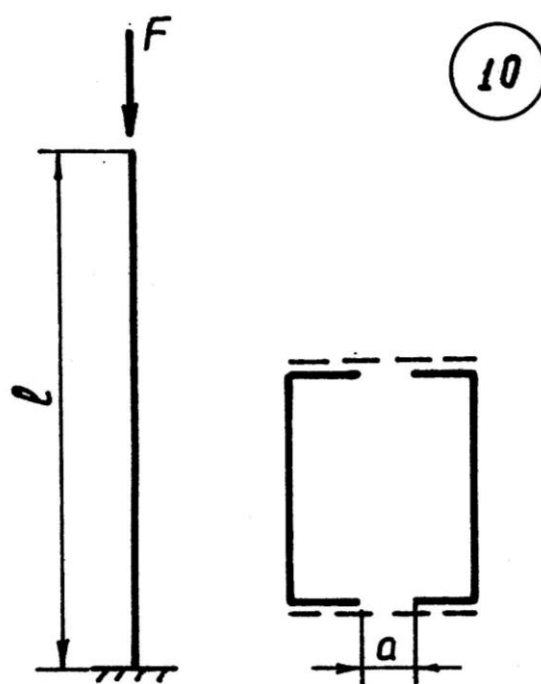
$$F = 360 \text{ кН}; \quad l = 4,4 \text{ м.}$$



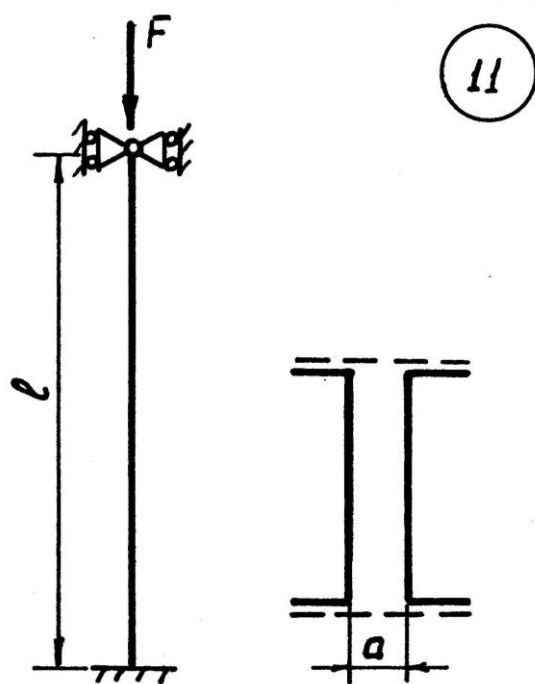
$$F = 760 \text{ кН}; \quad l = 6,2 \text{ м.}$$



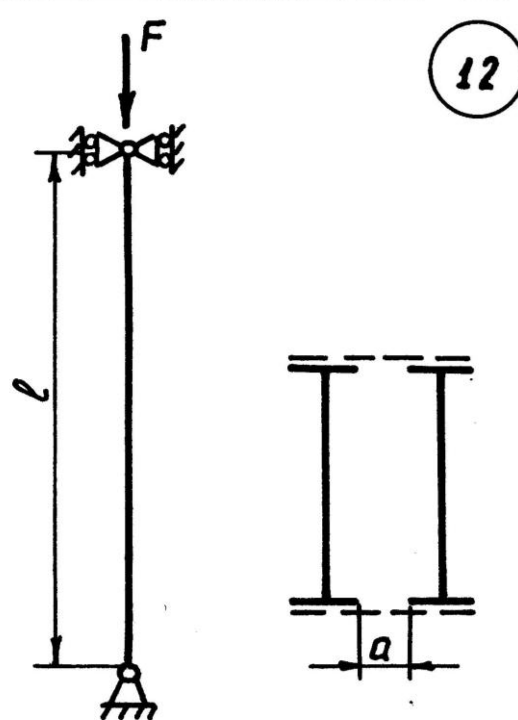
$$F = 900 \text{ кН}; \quad l = 8,0 \text{ м.}$$



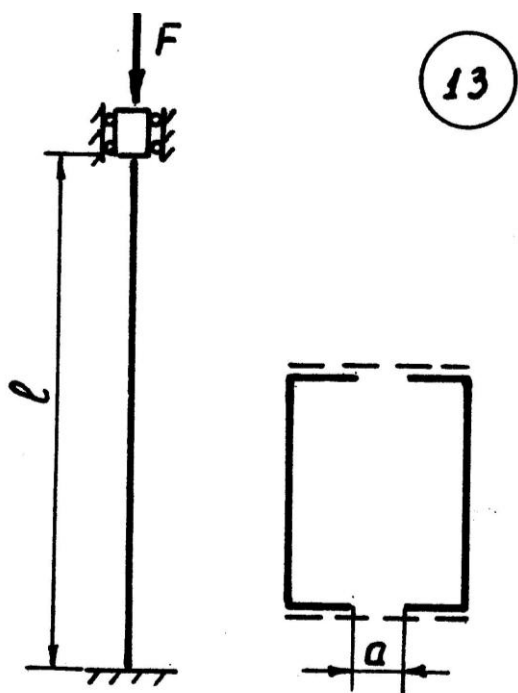
$$F = 430 \text{ кН}; \quad l = 3,8 \text{ м.}$$



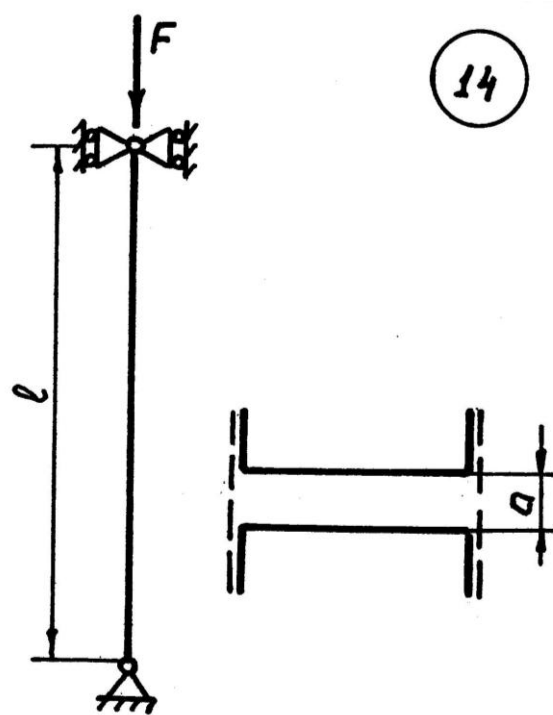
$$F = 650 \text{ кН}; \quad l = 6,6 \text{ м.}$$



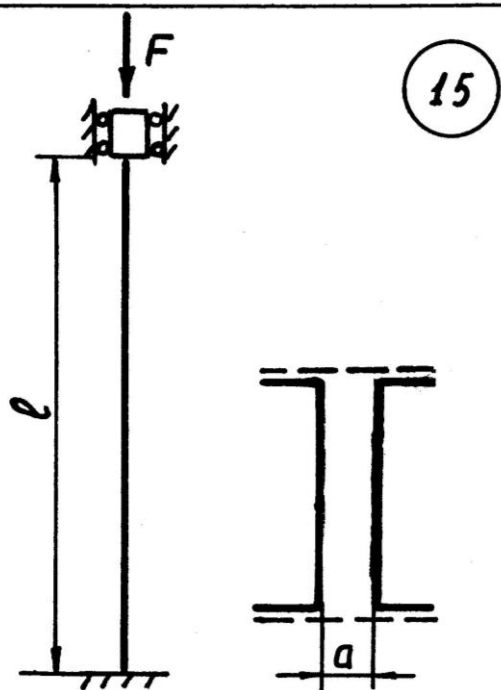
$$F = 510 \text{ кН}; \quad l = 5,0 \text{ м.}$$



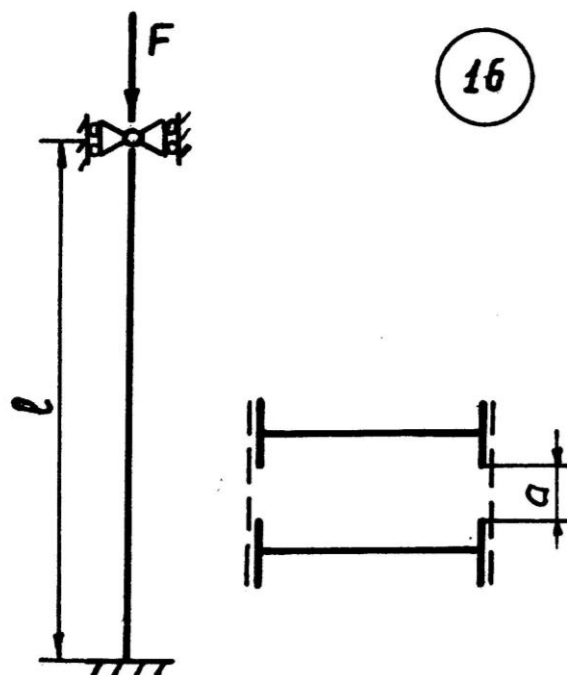
$$F = 940 \text{ кН}; \quad l = 7,5 \text{ м.}$$



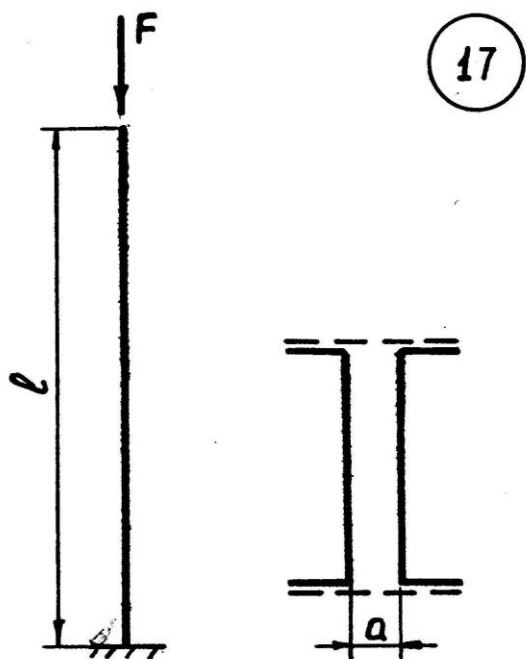
$$F = 600 \text{ кН}; \quad l = 5,7 \text{ м.}$$



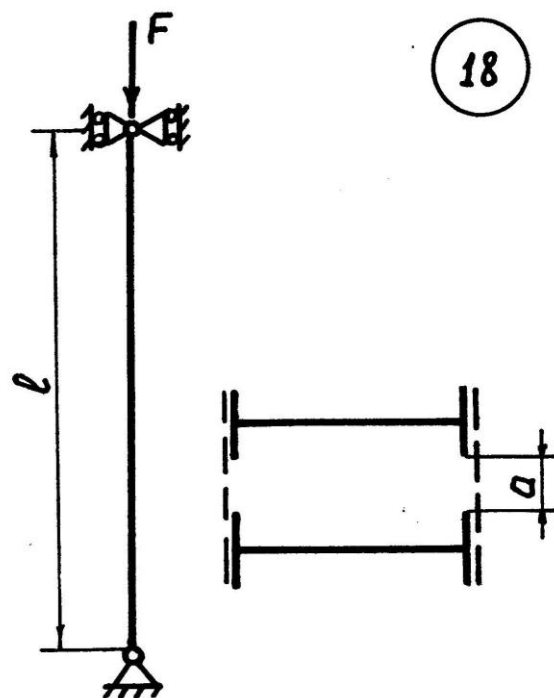
$$F = 1000 \text{ кН}; \quad l = 7,2 \text{ м.}$$



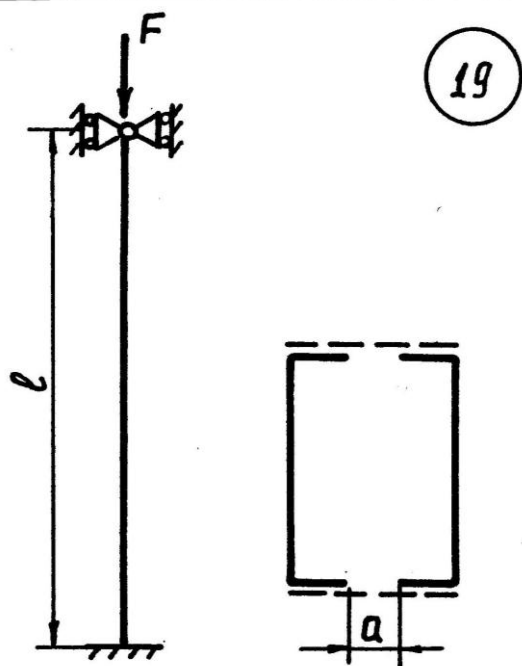
$$F = 860 \text{ кН}; \quad l = 6,4 \text{ м.}$$



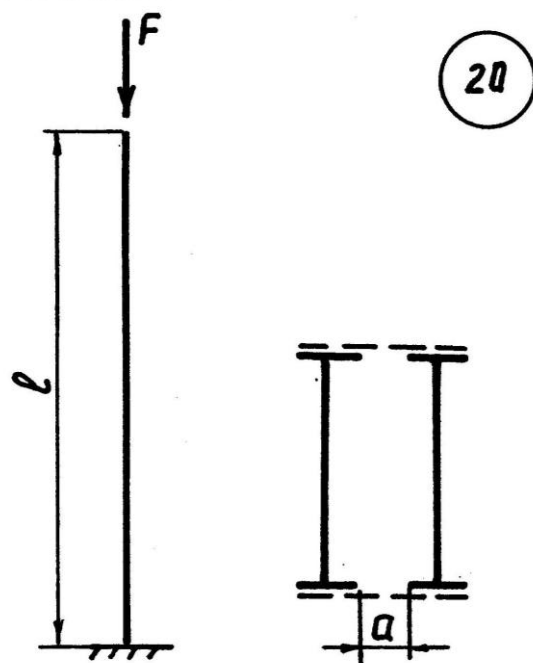
$F = 470 \text{ кН}; \quad l = 3,6 \text{ м.}$



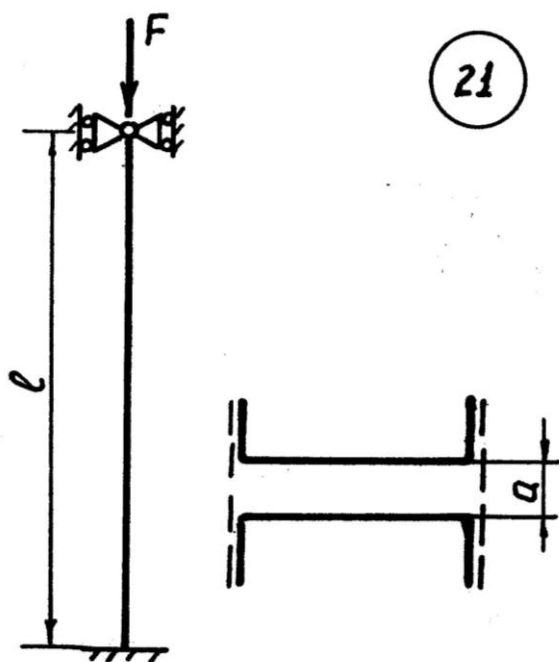
$F = 530 \text{ кН}; \quad l = 4,9 \text{ м.}$



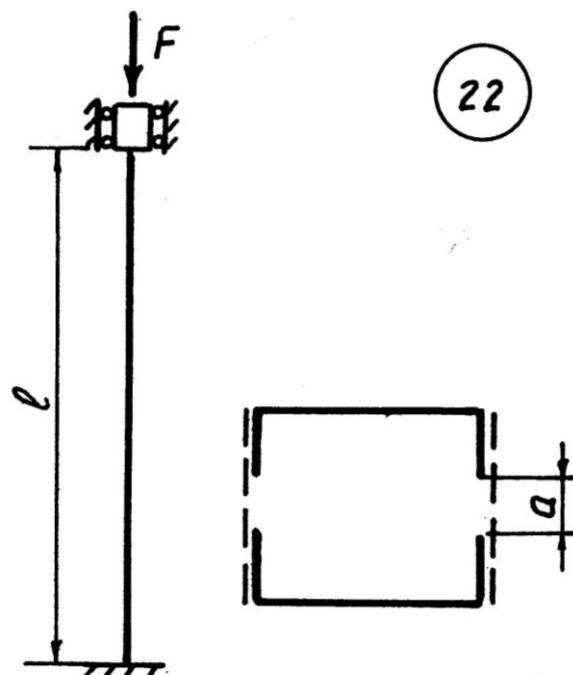
$F = 780 \text{ кН}; \quad l = 6,7 \text{ м.}$



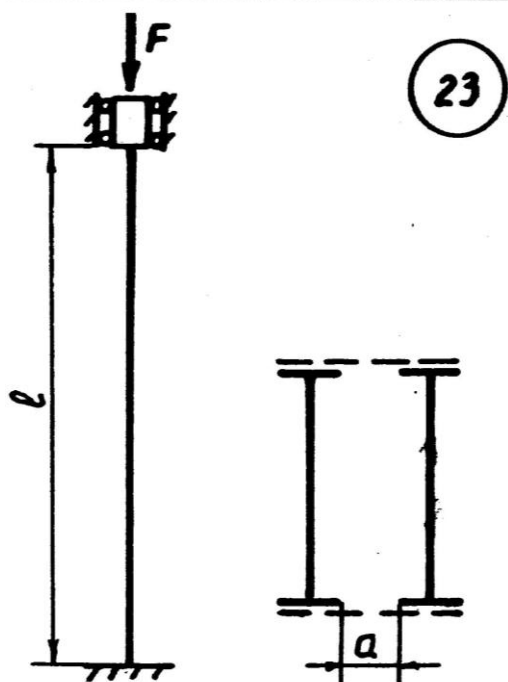
$F = 450 \text{ кН}; \quad l = 3,2 \text{ м.}$



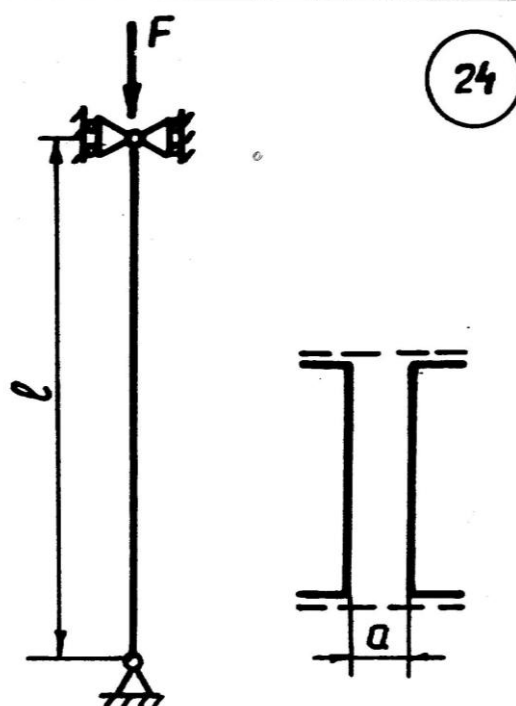
$$F = 750 \text{ кН}; \quad l = 5,8 \text{ м.}$$



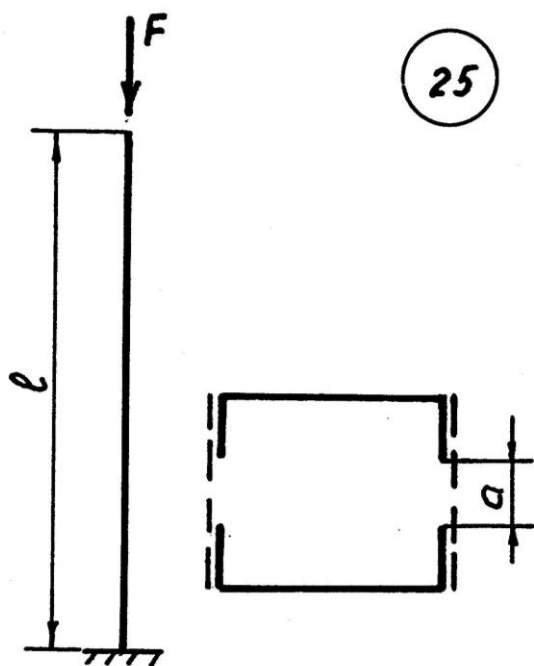
$$F = 980 \text{ кН}; \quad l = 6,8 \text{ м.}$$



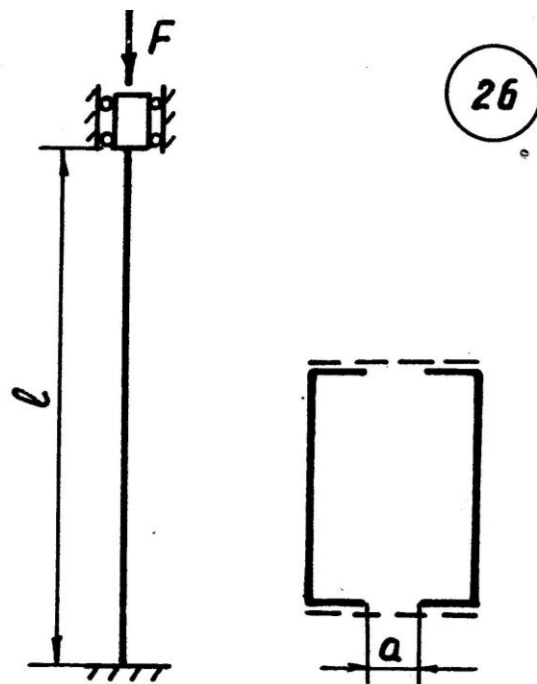
$$F = 890 \text{ кН}; \quad l = 7,6 \text{ м.}$$



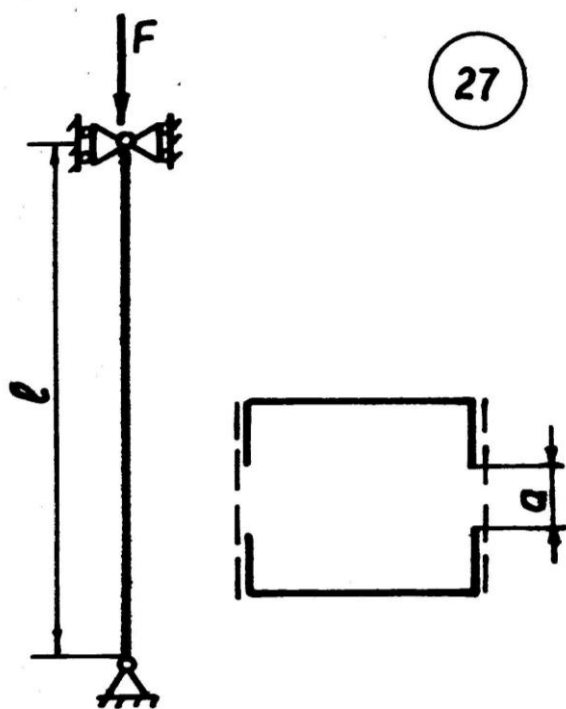
$$F = 610 \text{ кН}; \quad l = 5,3 \text{ м.}$$



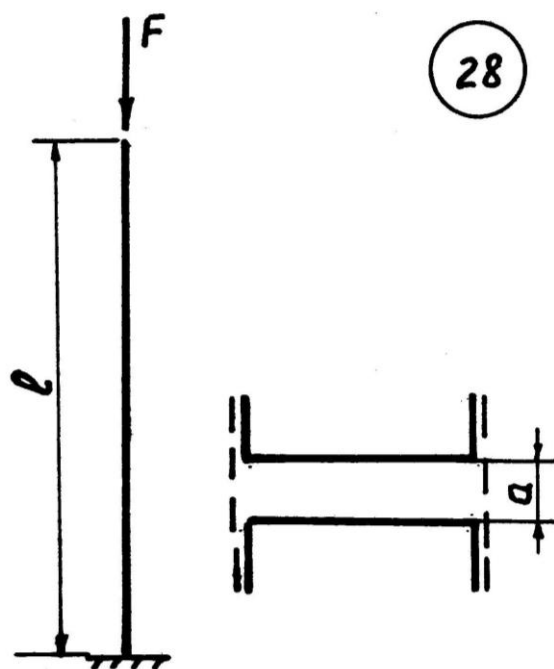
$$F = 530 \text{ кН}; \quad l = 4,0 \text{ м.}$$



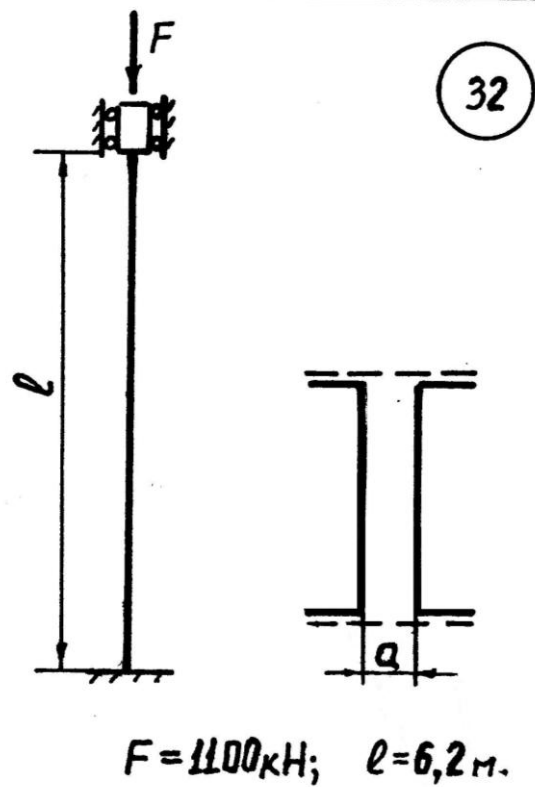
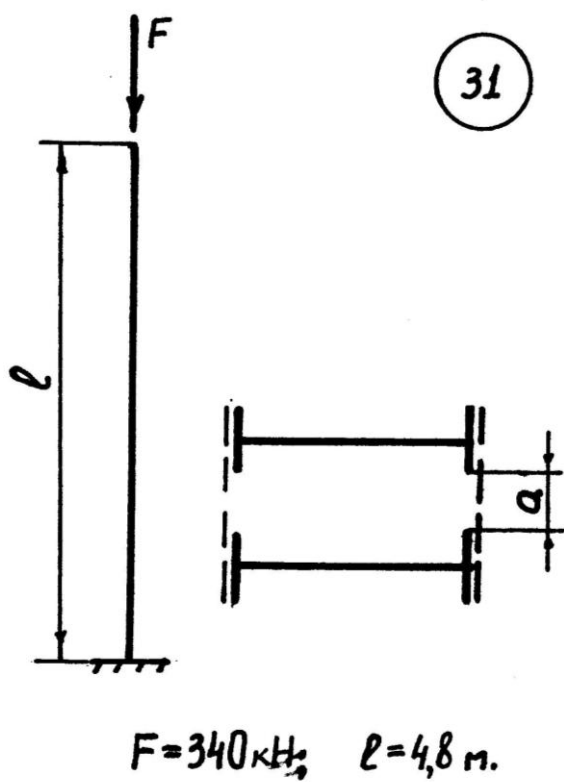
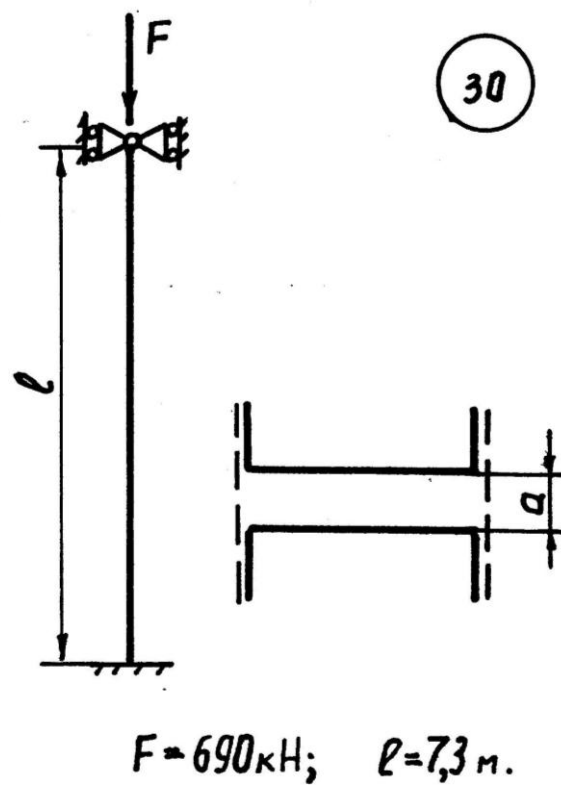
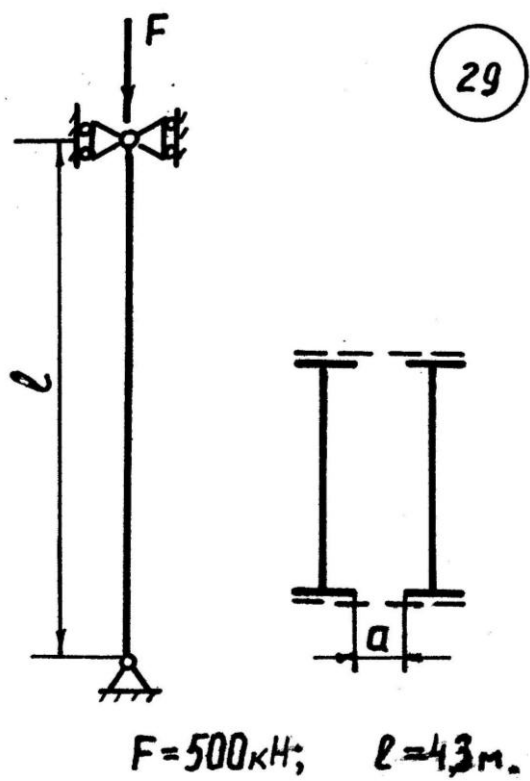
$$F = 880 \text{ кН}; \quad l = 6,0 \text{ м.}$$

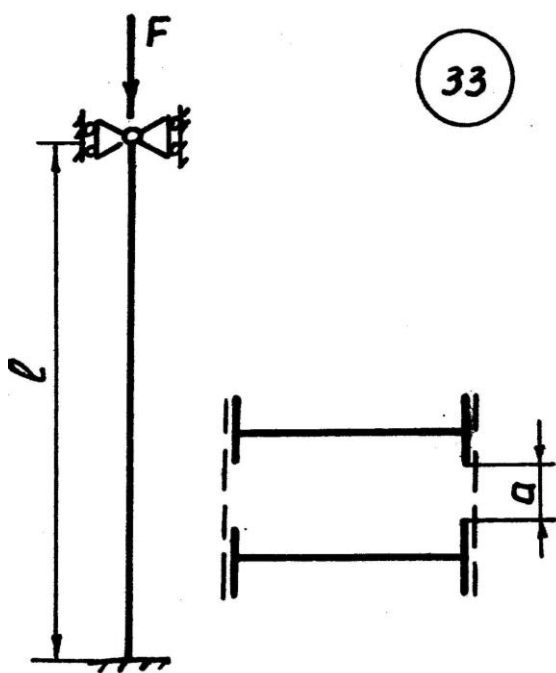


$$F = 480 \text{ кН}; \quad l = 5,1 \text{ м.}$$

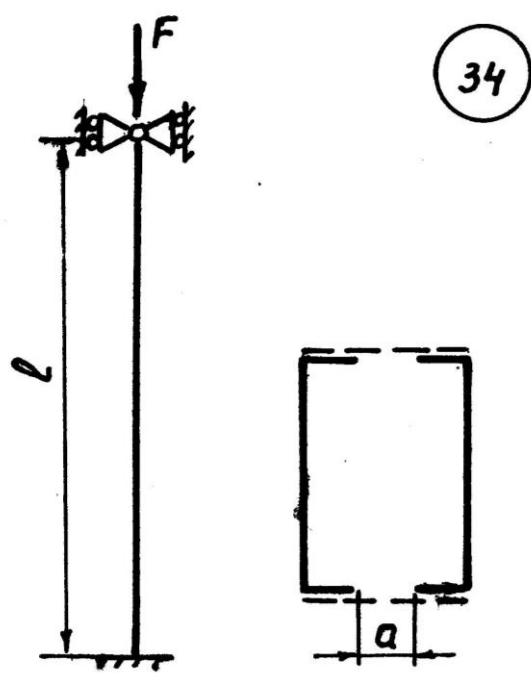


$$F = 570 \text{ кН}; \quad l = 3,4 \text{ м.}$$

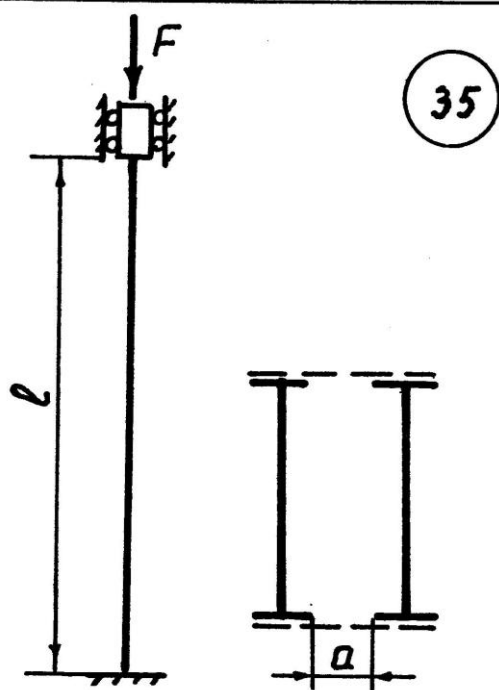




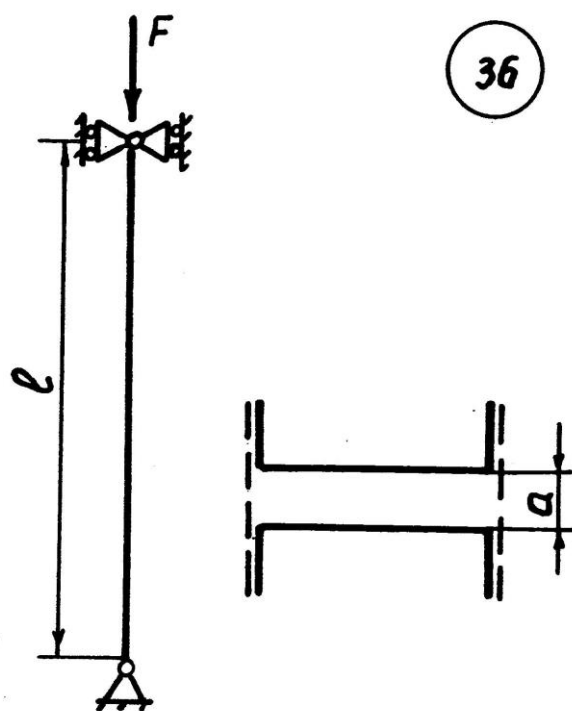
$$F = 840 \text{ кН}; \quad l = 5,8 \text{ м.}$$



$$F = 620 \text{ кН}; \quad l = 8,0 \text{ м.}$$



$$F = 920 \text{ кН}; \quad l = 6,4 \text{ м.}$$



$$F = 590 \text{ кН}; \quad l = 5,6 \text{ м.}$$