# Announcements

- CBTF Quiz 7 – last day!

- Last day of office hours and Piazza help: Wed, Dec. 13

- No discussion sections next week

- TAM 211 final exam starts next Thursday (12/14)

❑ Upcoming deadlines:

- Saturday (12/9)
  - ME HW27

- Tuesday (12/12)
  - PL HW26

The scissors jack supports a load **P**. Determine the axial force in the screw necessary for equilibrium when the jack is in the position shown. Each of the four links has a length L and is pin-connected at its center. Points B and D can move horizontally.
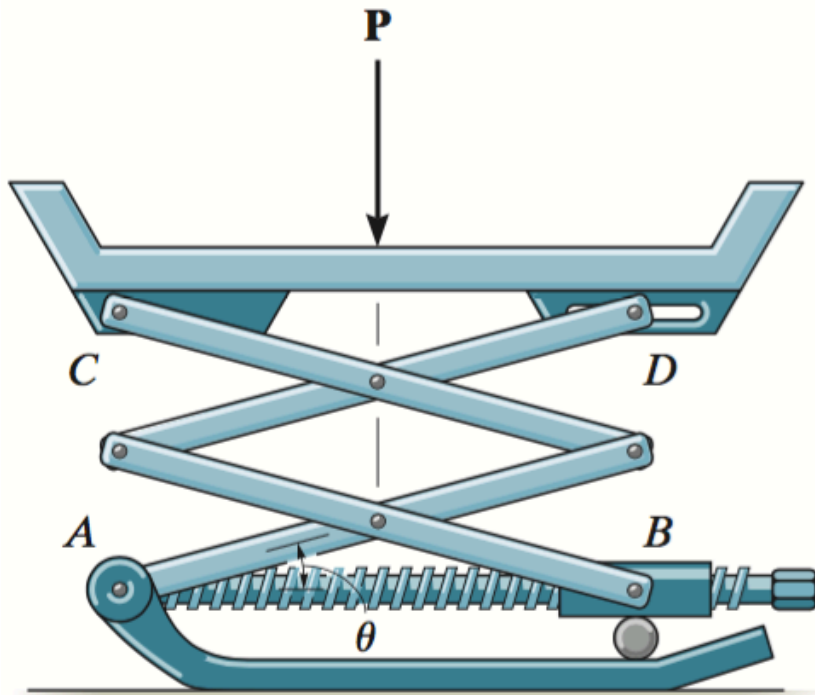
The disk has a weight of 10 lb and is subjected to a vertical force P = 8 lb and a couple moment M = 8 lb ft. Determine the disk's rotation u if the end of the spring wraps around the periphery of the disk as the disk turns. The spring is originally unstretched.

$M = 8 \text{ lb} \cdot \text{ft}$

1.5 ft

$k = 12 \text{ lb/ft}$

$P = 8 \text{ lb}$
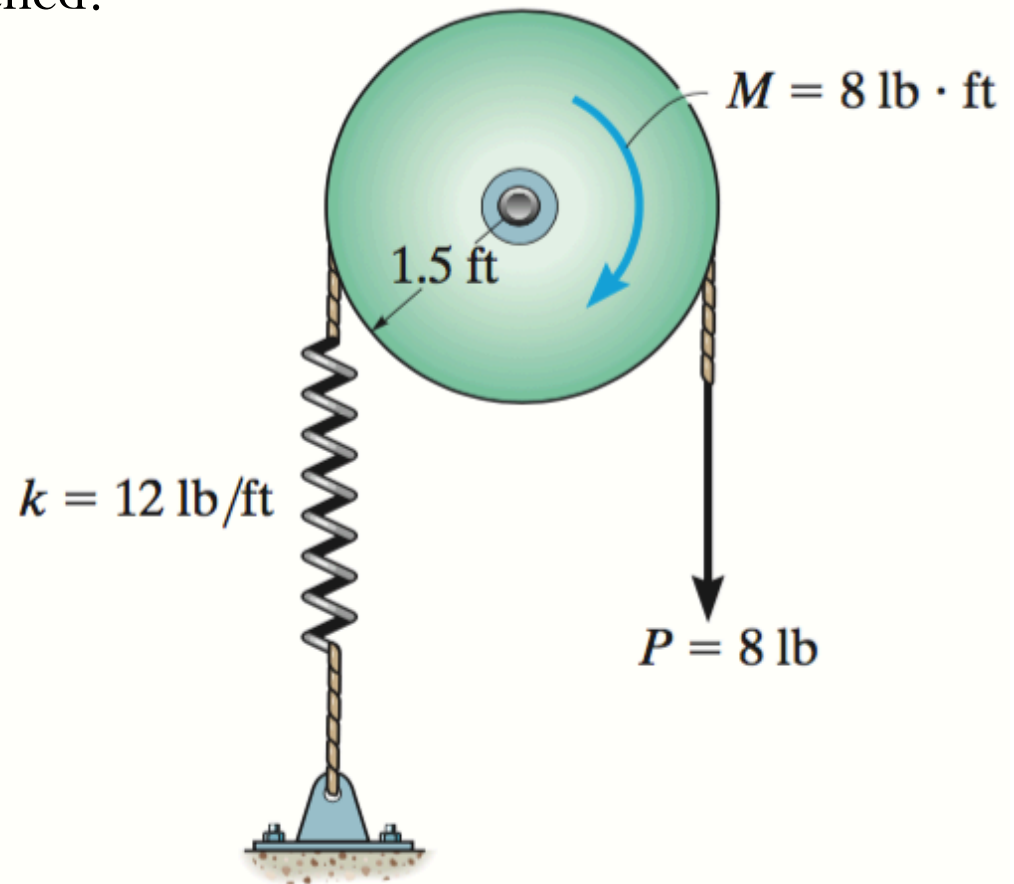
When $\theta = 20°$, the 50-lb uniform block compresses the two vertical springs 4 in. If the uniform links AB and CD each weigh 10 lb, determine the magnitude of the applied couple moments **M** needed to maintain equilibrium when u = 20°.
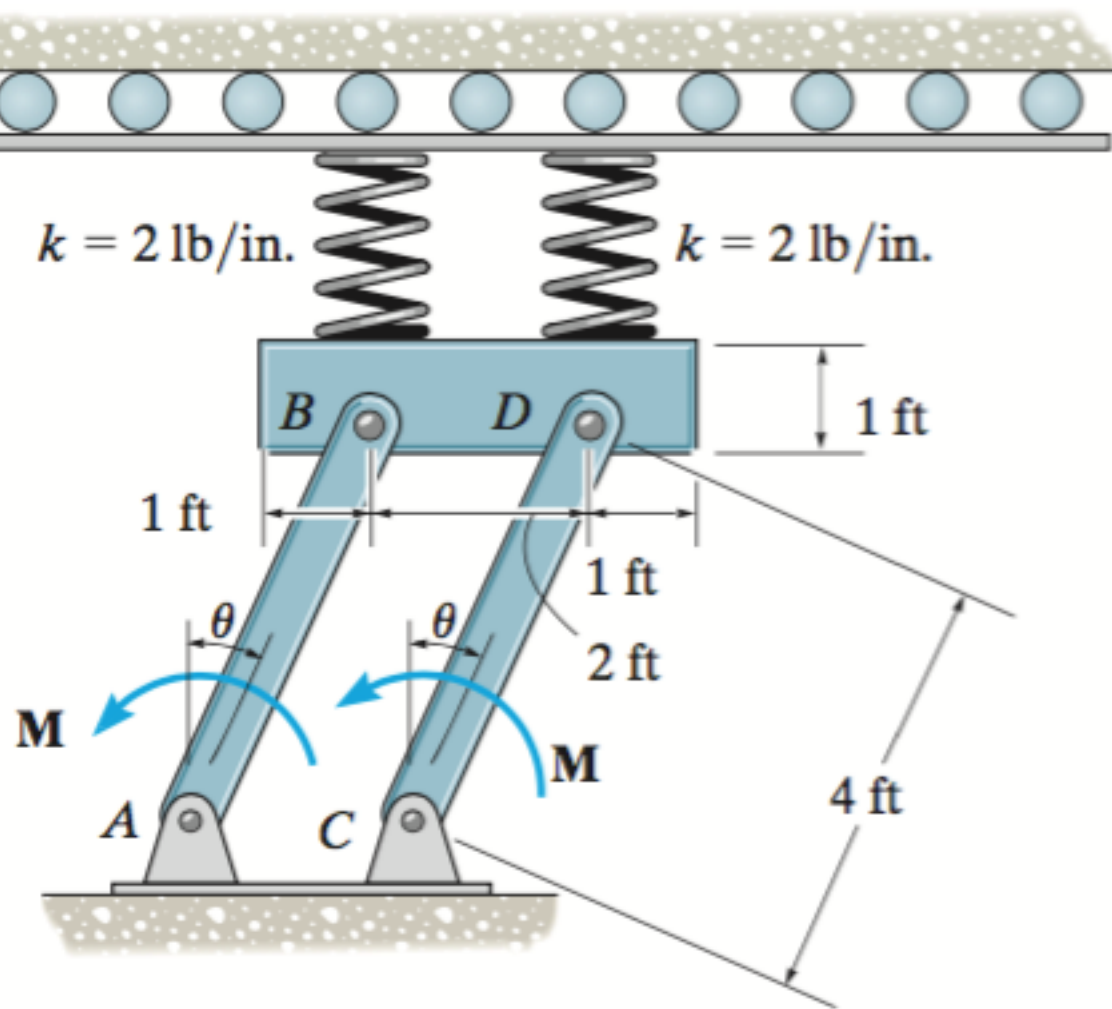
The crankshaft is subjected to a torque of M = 50 N m. Determine the horizontal compressive force F applied to the piston for equilibrium when $\theta = 60°$.

100 mm

400 mm

θ

M

F