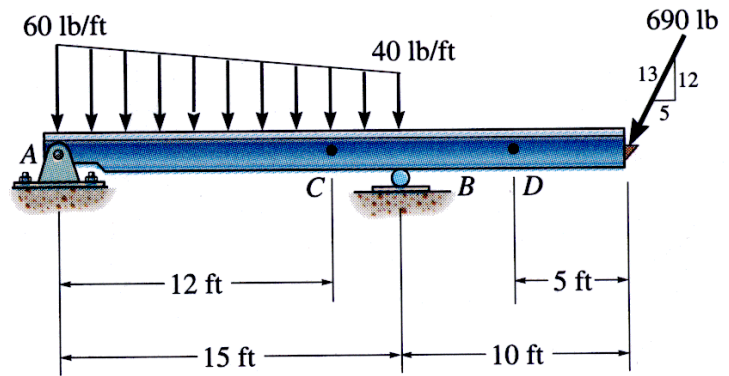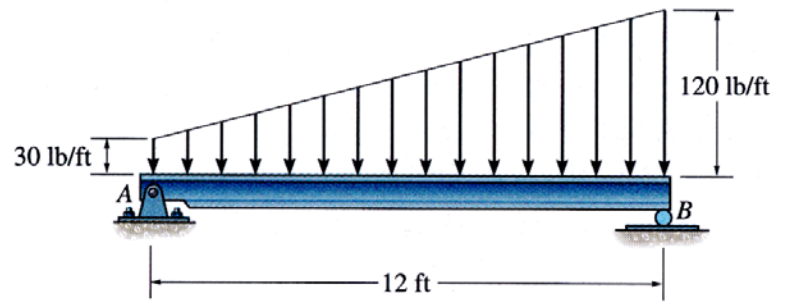1.   Determine the internal normal force, shear force, and moment at points C and D of the beam.

2.   Determine the maximum moment and where it occurs in the beam.

120 lb/ft

30 lb/ft

A

B

12 ft

3.   The spool has a mass of 200 kg and rests against the wall and on the floor. If the coefficients of static friction at A and B are : $_A$ = 0.4 and : $_B$ = 0.5, respectively, determine the smallest vertical force P that must be applied to the cable that will cause the spool to turn.

P

0.4 m

G

0.1 m

A

B
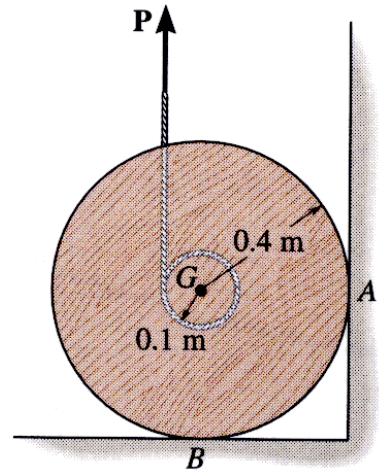
4. Locate the centroid (x, y) of the shaded area.

$y^2 = x$

1 m

1 m

1 m

y

x