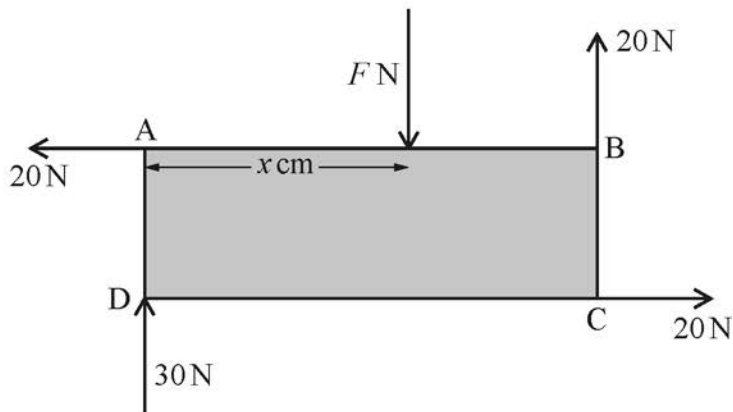


5 ABCD is a rectangular lamina in which AB is 30 cm and AD is 10 cm.

Three forces of 20 N and one force of 30 N act along the sides of the lamina as shown in the diagram.



An additional force  $F$  N is also applied at right angles to AB to a point on the edge AB  $x$  cm from A.

(a) Given that the lamina is in equilibrium, calculate the values of  $F$  and  $x$ . [3]

The point of application of the force  $F$  N is now moved to B, but the magnitude and direction of the force remain the same.

(b) Explain the effect of the new system of forces on the lamina. [2]