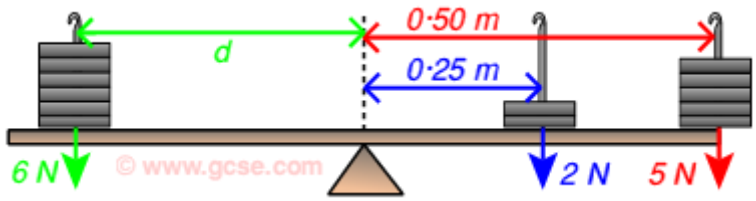
Answer on Question #59889-Physics – Mechanics | Relativity

At what distance must be 6 N act to balance the other forces?

Solution



When balanced: sum of clockwise moments = sum of anticlockwise moments.

The clockwise moment is

$$2 \cdot 0.25 + 5 \cdot 0.5 = \ 3.0\ Nm.$$

To balance this, the anticlockwise moment must also be 3.0 Nm. So:

$$d = \frac{3.0}{6} = 0.5\ m.$$

Answer: 0.5 m.