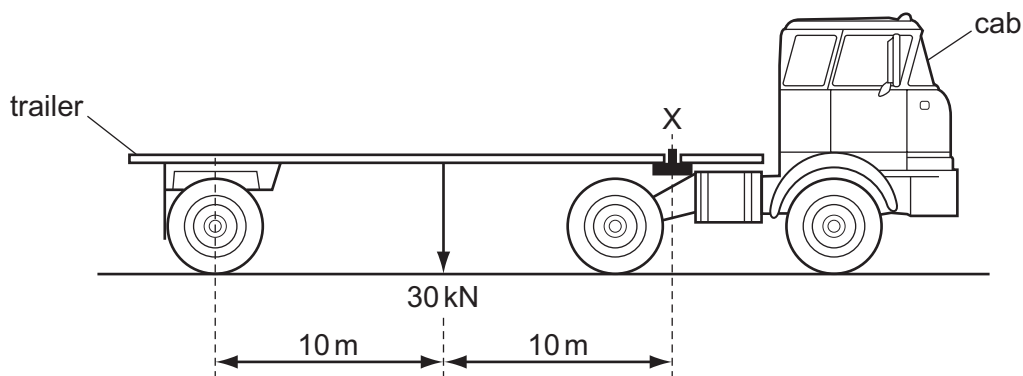


- 14 A trailer of weight 30 kN is hitched to a cab at X, as shown in the diagram.



What is the upward force exerted by the cab on the trailer at X?

- A 3 kN                      B 15 kN                      C 30 kN                      D 60 kN
- 15 When a horizontal force  $F$  is applied to a frictionless trolley over a distance  $s$ , the kinetic energy of the trolley changes from 4 J to 8 J.
- If a force of  $2F$  is applied to the trolley over a distance of  $2s$ , what will the original kinetic energy of 4 J become?
- A 16 J                      B 20 J                      C 32 J                      D 64 J
- 16 The kinetic energy of a vehicle of mass 1000 kg is  $4.5 \times 10^5$  J. It is braked with a total constant braking force of 6000 N.

What will be its stopping distance?

- A 37 m                      B 75 m                      C 150 m                      D 300 m

**Space for working**