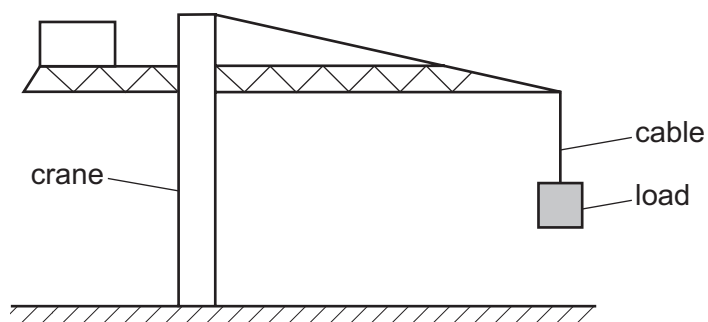


- 20** The diagram shows a large crane on a construction site lifting a cube-shaped load at a constant speed.

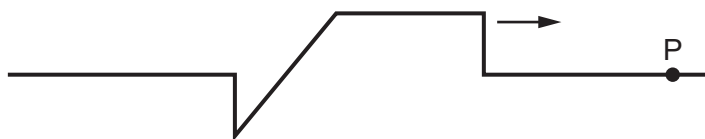


A model is made of the crane, its load and the cable supporting the load.

The material used for each part of the model is the same as that in the full-size crane, cable and load. The model is one tenth full-size in all linear dimensions.

What is the ratio  $\frac{\text{stress in the cable on the full-size crane}}{\text{stress in the cable on the model crane}}$  ?

- A** 0.1      **B** 1      **C** 10      **D** 100
- 21** A wave pulse moves along a stretched rope in the direction shown.



Which diagram shows the variation with time  $t$  of the displacement  $s$  of the particle P in the rope?

