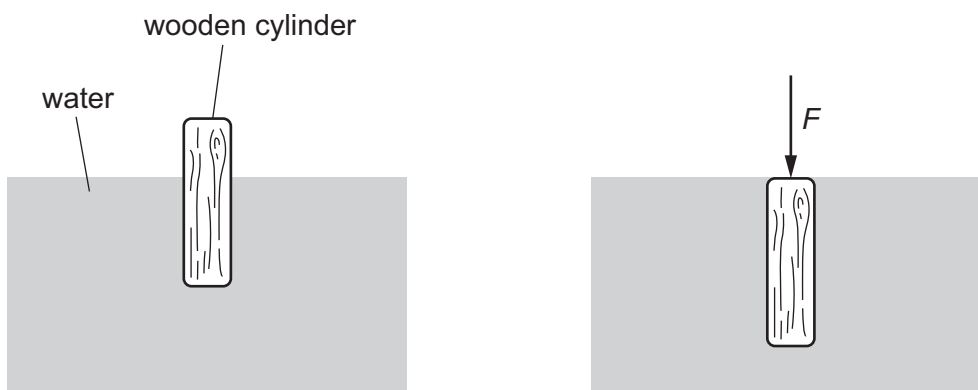


- 16 A wooden cylinder floats partially submerged in a bath of water. A force  $F$  is applied to the cylinder until it is just fully submerged.

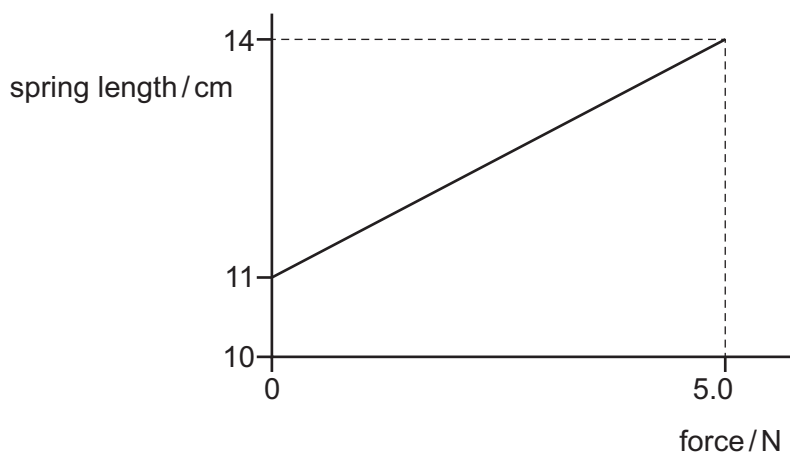


Which statement is **not** correct?

- A Some of the water gains gravitational potential energy.
  - B The cylinder loses gravitational potential energy.
  - C Work is done by force  $F$  on the cylinder.
  - D Work is done by the upthrust on the cylinder.
- 17 The motor of a crane lifts a load of mass 600 kg. The load rises vertically at a constant speed of 12 m per minute.

What is the useful power output of the motor?

- A 0.12 kW
  - B 1.2 kW
  - C 7.2 kW
  - D 71 kW
- 18 The graph shows the effect of applying a force of up to 5.0 N to a spring.



The spring obeys Hooke's law for forces up to 7.0 N.

What is the total extension of the spring produced by a 7.0 N force?

- A 4.2 cm
- B 5.6 cm
- C 15 cm
- D 20 cm