14 Which expression for pressure is correct?

A force per unit area

B force per unit volume

C mass per unit area

D mass per unit volume

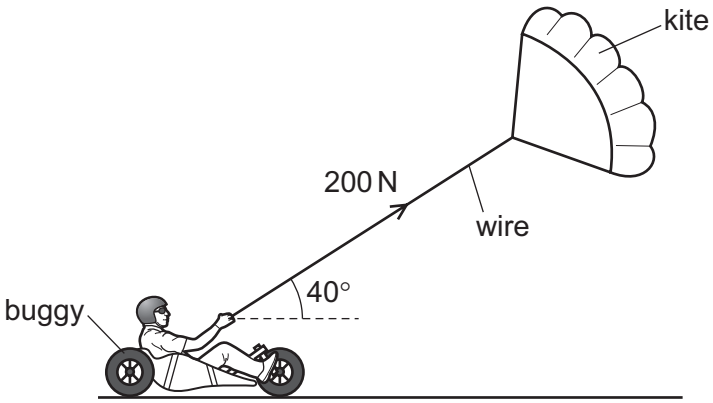
15 A ball has a mass of 0.50 kg and a volume of $1.3 \times 10^{-3}\,m^3$. The ball is floating in equilibrium on still water. The two forces that act on the ball are its weight and the upthrust due to the water.

The density of the water is $1.0 \times 10^{3}\,kg\,m^{-3}$.

What is the percentage of the volume of the ball above the surface of the water?

A 3.9% **B** 38% **C** 62% **D** 96%

16 A man sits on a buggy that is pulled along by a wire attached to a kite. The wire is at an angle of 40° to the horizontal and has a constant tension of 200 N. The man and buggy travel a distance of 20 m along a straight horizontal path. The wire and the path of the buggy are in the same vertical plane.



What is the work done by the tension force on the man and buggy?

A 2.6 kJ **B** 3.1 kJ **C** 3.4 kJ **D** 4.0 kJ

17 A ball is thrown vertically upwards from the surface of the Earth.

Which statement describes the energy of the ball as it rises through the air?

A The kinetic energy of the ball decreases as the gravitational potential energy decreases.

B The kinetic energy of the ball decreases as the gravitational potential energy increases.

C The kinetic energy of the ball increases as the gravitational potential energy decreases.

D The total energy of the ball increases.