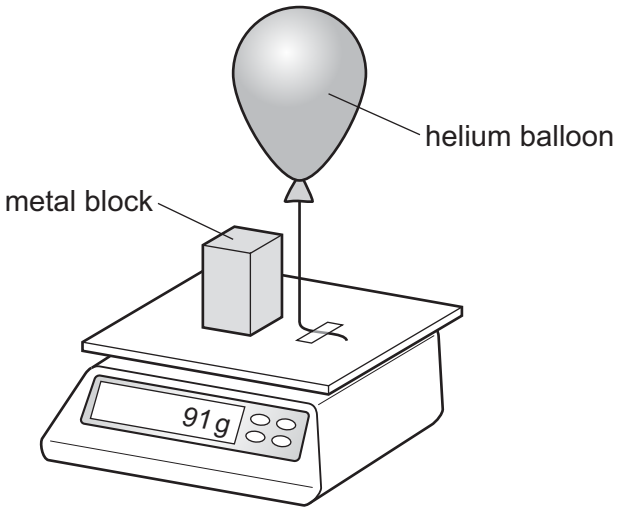
4 A helium balloon is tied to a top-pan balance. A metal block of mass 100 g is placed on the balance. The reading on the balance is 91 g.



Which statement can be deduced from this experiment?

A The balloon exerts a downward force of 0.09 N on the top-pan balance.

B The helium has a mass of –9 g.

C The helium has a mass of +9 g.

D The resultant downward force on the top-pan balance is 0.91 N.

5 A liquid has a volume of 0.040 m^3 and a mass of 30 000 g.

What is the density of the liquid?

A 0.075 kg / m^3 **B** 7.5 kg / m^3 **C** 750 kg / m^3 **D** 7500 kg / m^3

6 A resultant force of 4.0 N acts on an object of mass 0.50 kg for 3.0 seconds.

What is the change in velocity caused by this force?

A 4.0 m / s **B** 6.0 m / s **C** 12 m / s **D** 24 m / s

7 Which quantities are both vectors?

A acceleration and force

B acceleration and pressure

C density and force

D density and pressure