

1/ Express using scientific notation;

- 0.00045 m
- 4,273,100 g
- 0.010007 litres

2/ Convert;

- 3,270 grammes to kg
- 0.074 km to metres
- 4×10^{-4} litres to millilitres
- 340 milligrammes to grammes

3/ A box has dimensions 34 cm by 173 cm by 94 cm.

- find it's volume in cm^3 .
- convert the dimensions of the box into metres
- find the volume of the box in m^3 .

4/ A solid steel box has dimensions 14 cm by 8 cm by 39 cm and mass of 34.3 kg.

- find the volume of the box in m^3 .
- find the density of steel in kg m^{-3} . (note density = mass / volume)

5/ A pole vaulter climbs 6m in 2.2s at constant acceleration. His final velocity is 0ms^{-1} . Calculate his take off velocity and deceleration.
[5.45ms^{-1} , -2.48ms^{-2}]

6/ A car changes to the fast lane on the M50 and accelerates smoothly from 20m/s (about 45mph) to 35m/s (about 79mph) in 250m. How long does this take? Calculate the acceleration.
[9.1s , 1.65m/s^2]

7/ A car starts from rest and accelerates uniformly for 15s to a velocity of 12m/s. Show that the average acceleration of the car is 0.8m/s^2 . How far does the car travel in the 15s?

8/ A ball dropped from a tower strikes the ground in 3s. Find the speed with which the ball strikes the ground and the height of the tower