

- 1/ Express using scientific notation;
 - a) 0.00045 m
 - b) 4,273,100 g
 - c) 0.010007 litres
- 2/ Convert;
 - a) 3,270 grammes to kg
 - b) 0.074 km to metres
 - c) 4×10^{-4} litres to millilitres
 - d) 340 milligrammes to grammes
- 3/ A box has dimensions 34 cm by 173 cm by 94 cm.
 - a) find it's volume in cm^3 .
 - b) convert the dimensions of the box into metres
 - c) 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.
 - a) find the volume of the box in m^3 .
 - b) 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