

Q1. (2017)

9 (a) Density = $\frac{\text{mass}}{\text{volume}}$

The mass of solid A is 6 times the mass of solid B.

The volume of solid A is 3 times the volume of solid B.

Complete the sentence.

[1 mark]

The density of solid A is _____ times the density of solid B.

Q2. (2017)

9 (b) Average speed = $\frac{\text{distance}}{\text{time}}$

If the distance is halved and the time is doubled, what happens to the average speed?

Circle your answer.

[1 mark]

$\times 2$ $\times 4$ no change $\div 2$ $\div 4$

Q3. (2019)

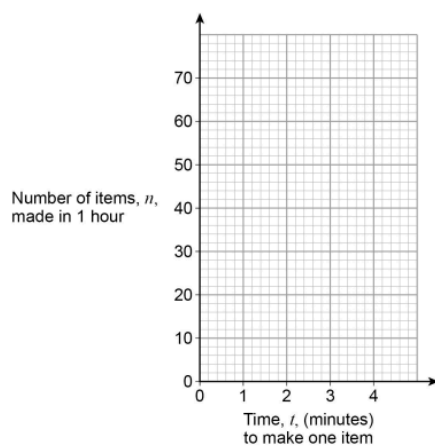
10 The number of items, n , made in 1 hour by a machine is given by $n = \frac{60}{t}$

t is the time in minutes the machine takes to make one item.

The value of t changes for different types of item.

10 (a) On the grid below, draw the graph of $n = \frac{60}{t}$ for values of t from 1 to 4

[2 marks]



Q4. (2021)

20 Which **one** of these is a unit of density?

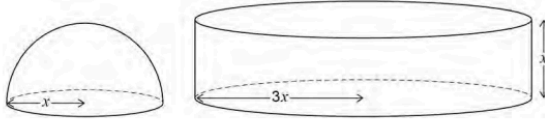
Circle your answer.

[1 mark]

cm^2/g cm^3/g g/cm^2 g/cm^3

Q5. (2023)

17

A solid hemisphere has radius x .A solid cylinder has radius $3x$ and height x .

Surface area of a sphere = $4\pi r^2$
where r is the radius

Work out the ratio

total surface area of the hemisphere : total surface area of the cylinder

Give your answer in its simplest form.

You **must** show your working.

[3 marks]

Answer _____ : _____