

1) a)

Dist	Time	Speed
100 m	13 s	$\frac{100}{13} = 7.69 \text{ m/s} \text{ ms}^{-1}$

b)

200 m	28 s	$\frac{200}{28} = 7.14 \text{ ms}^{-1}$
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c)

400 m	58.4 s	$\frac{400}{58.4} = 6.90 \text{ ms}^{-1}$
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d)

1500 m	4 m 52 s 292 s	$\frac{1500}{292} = 5.14 \text{ ms}^{-1}$
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2) a)

Time	Speed	Distance
2 hrs	80 km/h	$2 \times 80 = 160 \text{ km}$

b)

7 hrs	23 mph	$7 \times 23 = 161 \text{ miles}$
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c)

6 s	9 m/s	$9 \times 6 = 54 \text{ m}$
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d)

1 day 24 hrs	12 mph	$24 \times 12 = 288 \text{ miles}$
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3)

Dist	Speed	Time
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180 km	60 km/h	$\frac{180}{60} = 3 \text{ hrs}$
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280 miles	70 mph	$\frac{280}{70} = 4 \text{ hrs}$
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c)

8 km	24 km/h	$= \frac{8}{24} = \frac{1}{3} \text{ hr} = 20 \text{ min}$
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d)

15 miles	60 mph	$= \frac{15}{60} = \frac{1}{4} \text{ hr} = 15 \text{ min}$
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4) Vol 640 cm^3 Mass 912 g

$$\text{Density} = \frac{\text{Mass}}{\text{Vol}} = \frac{912}{640} = 1.425 \text{ g/cm}^3$$

5) Density 1.95 kg/litre

a) Vol = 4.85 litres

$$\begin{aligned}\text{Mass} &= \text{Density} \times \text{Vol} \\ &= 1.95 \times 4.85 \\ &= 9.4575 \text{ kg} \\ &= 9.458 \text{ kg}\end{aligned}$$

b) Mass 12 kg

$$\text{Vol} = \frac{\text{Mass}}{\text{Density}} = \frac{12}{1.95} = 6.15 \text{ litres}$$

Hwk for Tue 3 Dec

i) $5x + 2y = 24$
 $4x + 3y = 22$

2)

$$3x - 4y = 11$$

$$5x - 2y = 23$$

3)

$$7x + 6y = 26$$

$$5x - 3y = 4$$