

## Exercise 22.1S continued

- 3) a) 3 hrs  
b) 4 hrs  
c)  $\frac{1}{3}$  hr = 20 min  
d)  $\frac{1}{4}$  hr = 15 min

4) density =  $\frac{912}{640} = 1.425 \text{ g/cm}^3$

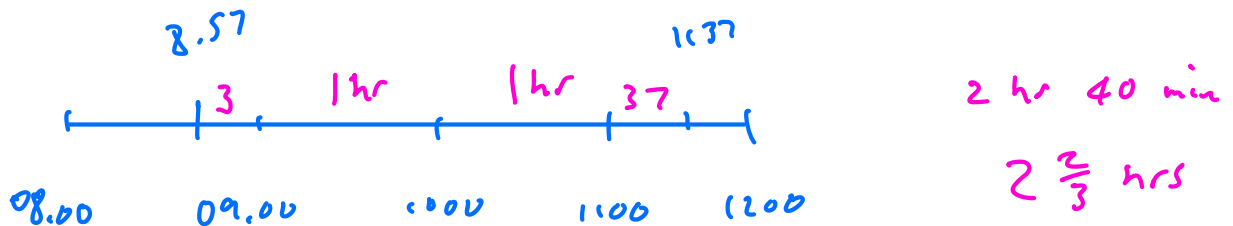
5) a)  $1.95 \times 4.85 = 9.46 \text{ Kg}$

b)  $12 \div 1.95 = 6.15 \text{ litres}$

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## Exercise 22.1A

- 1) Start 8.57                      Distance 238 miles  
End 11.37



$$\begin{aligned} \text{Speed} &= \frac{\text{Dist}}{\text{Time}} = \frac{238}{2 \frac{2}{3}} \\ &= 238 \div \frac{8}{3} \\ &= 238 \times \frac{3}{8} \\ &= 89.25 \text{ mph} \end{aligned}$$

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3) Density =  $\frac{\text{Mass}}{\text{Vol}}$

Vol =  $9 \times 5 \times 4 = 180 \text{ cm}^3$   
mass = 1.53 kg

$$\text{Density} = \frac{1530 \text{ g}}{180 \text{ cm}^3} = 8.5 \text{ g/cm}^3$$

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5)

Speed km-ph	Dist km	Time	Time in hrs
105	525 km	5 hr	
48	106	2 hr $12\frac{1}{2}$ min	2.20833
37.3	84	2 hr 15 min	2.25
86	215	2 hr 30 min	2.5
37.1	65	1 hr 45 min	1.75

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### Exercise (even numbers)

2) Rate  $0.2 \text{ kg/s} = 0.2 \times 60 \text{ per min}$   
In 25 min mass fallen  $= 0.2 \times 60 \times 25$   
 $= 300 \text{ kg}$

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4) Travels 24 miles in 45 min  
 $= \frac{3}{4} \text{ hr}$   
 $= 0.75$

$$\text{Speed} = \frac{\text{Dist}}{\text{Time}} = \frac{24}{0.75} = 32 \text{ mph}$$

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