

1. Work out the average speed:

- a) 1 kilometre in 1 hour 1km/h or 1kmh^{-1} b) 10 kilometres in 1 hour 10km/h or 10kmh^{-1}
- c) 10 kilometres in 10 hours 1km/h or 1kmh^{-1} d) 10 kilometres in 5 hours 2km/h or 2kmh^{-1}
- e) 20 metres in 10 seconds 2m/s or 2ms^{-1} f) 100 metres in 5 seconds 20m/s or 20ms^{-1}
- g) 5 kilometres in 5 hours 1km/h or 1kmh^{-1} h) 15 kilometres in 3 hours 5km/h or 5kmh^{-1}
- i) 25 kilometres in 5 hours 5km/h or 5kmh^{-1} j) 60 kilometres in 12 hours 5km/h or 5kmh^{-1}
- k) 200 metres in 40 seconds 5m/s or 5ms^{-1} l) 150 metres in 25 seconds 6m/s or 6ms^{-1}

2. Work out the average speed, giving your answer as a decimal to 3 s.f.:

a) 3 kilometres in 2 hours 1.50km/h or 1.50kmh⁻¹ b) 15 kilometres in 4 hours 3.75km/h or 3.75kmh⁻¹

c) 11 kilometres in 10 hours 1.10km/h or 1.10kmh⁻¹ d) 10 kilometres in 15 hours 0.667km/h or 0.667kmh⁻¹

e) 20 metres in 12 seconds 1.67m/s or 1.67ms⁻¹ f) 104 metres in 20 seconds 5.20m/s or 5.20ms⁻¹

g) 6 kilometres in 5 hours 1.20km/h or 1.20kmh⁻¹ h) 15 kilometres in 8 hours 1.88km/h or 1.88kmh⁻¹

i) 25 kilometres in 7 hours 3.57km/h or 3.57kmh⁻¹ j) 50 kilometres in 12 hours 4.17km/h or 4.17kmh⁻¹

k) 200 metres in 70 seconds 2.86m/s or 2.86ms⁻¹ l) 150 metres in 45 seconds 3.33m/s or 3.33ms⁻¹

3. Work out the distance:

a) 25km/h for 4 hours 100km

b) 15km/h for 3 hours 45km

c) 12km/h for 10 hours 120km

d) 75km/h for 2 hours 150km

e) 12m/s for 12 seconds 144m

f) 35m/s for 20 seconds 700m

g) 19km/h for 4 hours 76km

h) 50km/h for 5 hours 250km

i) 22km/h for 10 hours 220km

j) 175km/h for 2 hours 350km

k) 120m/s for 12 seconds 1440m

l) 45m/s for 20 seconds 900m

4. Work out the time:

a) 40km at 4km/h 10 hours

b) 120km at 60km/h 2 hours

c) 10m at 5m/s 2 seconds

d) 150m at 10m/s 15 seconds

e) 500mm at 25mm/s 20 seconds

f) 200cm at 50cm/s 4 seconds

g) 400km at 4km/h 100 hours

h) 12km at 4km/h 3 hours

i) 110m at 5m/s 22 seconds

j) 50m at 10m/s 5 seconds

k) 50mm at 25mm/s 2 seconds

l) 1200cm at 50cm/s 24 seconds

5. Convert the following amounts of time into seconds:

a) 1 minute 60 seconds

b) 2 minutes 120 seconds

c) 10 minutes 600 seconds

d) 15 minutes 900 seconds

e) 1 hour 3600 seconds

f) 2 hours 7200 seconds

g) 12 minutes 720 seconds

h) 20 minutes 1200 seconds

i) 8 minutes 480 seconds

j) 25 minutes 1500 seconds

k) 10 hours 36000 seconds

l) 5 hours 18000 seconds

5. Convert the following amounts of time into minutes:

a) $1\frac{1}{2}$ hours 90 minutes

b) $2\frac{1}{2}$ hours 150 minutes

c) $3\frac{1}{3}$ hours 200 minutes

d) $4\frac{1}{3}$ hours 260 minutes

e) $1\frac{1}{4}$ hours 75 minutes

f) $2\frac{3}{4}$ hours 165 minutes

g) $5\frac{1}{2}$ hours 330 minutes

h) $6\frac{1}{2}$ hours 390 minutes

i) $5\frac{1}{3}$ hours 320 minutes

j) $1\frac{1}{3}$ hours 80 minutes

k) $2\frac{1}{4}$ hours 135 minutes

l) $3\frac{3}{4}$ hours 225 minutes