Time Intervals

Exercise 1

Change the following from 12 hour time to 24 hour time

1) 2.00 pm **2)** 5.00 pm **3)** 4.30 pm

4) 7.00 am **5)** 11.00 am **6)** 4.15 am

7) 3.42 pm **8)** 5.16 am **9)** 11.27 pm

10) 12.00 pm **11)** 12.00 am **12)** 9.35 am

Exercise 2

Change the following from 24 hour time to 12 hour time

1) 1500 **2)** 0500 **3)** 1830

4) 0840 **5)** 0620 **6)** 1455

7) 1341 **8)** 1937 **9)** 2121

10) 1200 **11)** 0000 **12)** 1719

Exercise 3

Work out how much time in **hours and minutes** there are between these times. (eg 10.00 am to 11.30 am = 1hour 30mins)

1) 9.00 am to 11.00 am **2)** 7.30 pm to 10.30 pm

3) 12 noon to 7.00 pm **4)** 10.00 am to 4.00 pm

5) 3.30 pm to 5.00 pm **6)** 12.30 am to 6.00 am

7) 2.15 pm to 4.00 pm **8)** 5.15 pm to 6.30 pm

9) 6.45 am to 8.15 am **10)** 4.30 pm to 9.15 pm

11) 1630 to 2130 **12)** 0830 to 1930

13) 2030 to 2345 **14)** 0915 to 2345

Exercise 4

Work out how much time in **hours and minutes** there are between these times. (eg 7.10 am to 11.55 am = 4 hours 45 mins)

1) 9.10 am to 11.40 am

2) 7.40 pm to 10.50 pm

3) 12.20 noon to 7.50 pm

4) 10.10 am to 4.40 pm

5) 3.15 pm to 5.40 pm

6) 12.05 am to 6.35 am

7) 2.35 pm to 4.10 pm

8) 5.30 pm to 6.55 am

9) 6.12 am to 3.24 pm

10) 4.24 pm to 9.12 am

11) 1655 to 2125

12) 0845 to 1935

13) 0900 to 1107

14) 2011 to 0108

Exercise 5

Work out how much time in **hours** there are between these times.

eg 9.00 am to 11.15 am

= 2hours 15mins

= 2hours + **(15 ÷ 60)**

= 2hours + **0.25**hours

= 2·25hours

1)

a) 8.00 am to 11.00 am

b) 8.30 pm to 10.30 pm

c) 1.00 pm to 7.15 pm

d) 11.00 am to 4.30 pm

e) 3.15 pm to 7.30 pm

f) 1.30 am to 7.00 am

g) 2.15 pm to 9.30 pm

h) 3.15 am to 10.45 am

j) 2.15 pm to 4.00 pm

k) 5.30 pm to 9.15 pm

l) 0815 to 1130

m) 2030 to 2345

n) 0645 to 0815

p) 1630 to 2115

2) **a)** 9.10 am to 11.40 am **b)** 7.40 pm to 10.50 pm

c) 12.20 noon to 7.50 pm **d)** 10.10 am to 4.46 pm

e) 3.15 pm to 5.51 pm **f)** 12.06 am to 6.42 am

g) 2.35 pm to 4.41 pm **h)** 5.30 pm to 6.54 am

j) 6.12 am to 3.24 pm **k)** 4.24 pm to 9.12 am

l) 1655 to 2125 **m)** 0840 to 1928

n) 0906 to 1112 **p)** 2012 to 0106

Speed, Distance and Time

Exercise 1 (Distance)

1) How far does a car go in 3 hours at a speed of 50 mph?

2) How far does a bus go in 4 hours at a speed of 40 mph?

3) How far does an aeroplane fly in 6 hours at a speed of 350 mph?

4) How far can you cycle in 3 seconds at a constant speed of 7 m/s?

5) An express train is going at a constant speed of 60 m/s.
How far does it go in 8 seconds?

6) A jet plane is flying at a constant speed of 250 m/s.
How far does it go in 3 seconds?

7) If you go at a speed of 4 m/s, how far do you go in 10 seconds?

8) An ambulance travels at 70 mph for 3 hours.
How far does it travel in that time?

9) A veteran car travels at 15 mph for 5 hours. How far does it travel?

10) Find the distance travelled in 3 hours at an average speed of 55 km/h.

11) Find the distance travelled in 5 hours at an average speed of 44 mph.

12) Find the distance travelled in 30 seconds at an average speed of 8 m/s.

13) Find the distance travelled in 7·5 hours at an average speed of 80 km/h.

14) Find the distance travelled in 12 hours at an average speed of 30 mph.

15) An aircraft travels at a steady speed of 600 km/h for 4½ hours. How far does it travel?

16) A model speedboat travels at 2·5 m/s for 16 seconds. How far does it travel?

17) A mole burrows through the earth at a speed of 18 cm per minute. How far will it burrow in 15 minutes?

18) Calculate the distance travelled at 30 km/h for 5 hours.

Exercise 2 (Speed)

1) Pam cycled 20 metres in 4 seconds. What is her speed in m/s?

2) Ken is running at a constant speed. He covers 18 metres in 3 seconds. What is his speed?

3) A plane flying at a constant speed takes 5 seconds to go 1500 metres. What is its speed in m/s?

4) A lorry travelling along a motorway at a constant speed goes 100 metres in 4 seconds. What is its speed in m/s?

5) Find the average speed of a jogger who runs 18 miles in 3 hours.

6) Find the average speed of a train travelling 520 kilometres in 4 hours.

7) Find the average speed of a car covering 280 kilometres in 5 hours.

8) Find the average speed of Cheryl who walks 15 kilometres in 5 hours.

9) Find the average speed of an aeroplane which flies 2703 km in 3 hours.

10) Find the average speed of a space shuttle which flies 210960 miles in 12 hours.

11) Jill cycled 54 kilometres in 6 hours. What is her speed in km/h?

12) Calculate the average speed to travel 80 km in 20 hours.

13) Calculate the average speed to travel 72 km in 6 hours.

14) Calculate the average speed to travel 85 km in 17 hours.

15) Calculate the average speed to travel 121 km in 5 hours 30 minutes.

16) Calculate the average speed to travel 81 km in 2 hours 15 minutes.

17) Calculate the average speed to travel 324 km in 6 hours 45 minutes.

18) It is 150 miles from Hereford to London by rail. The first train in the morning takes 3 hours for the journey. What is its average speed?

Exercise 3 (Time)

1) Calculate the time taken to go 80 kilometres at a speed of 20 km/h.

2) Calculate the time taken to go 500 miles at a speed of 125 mph.

3) Calculate the time taken to go 432 metres at a speed of 8 m/s.

4) Calculate the time taken to go 630 kilometres at a speed of 90 km/h.

5) Calculate the time taken to go 504 kilometres at a speed of 72 km/h.

6) Calculate the time taken to go 448 miles at a speed of 56 mph.

7) Calculate the time taken to go 648 kilometres at a speed of 108 km/h.

8) Calculate the time taken to go 294 kilometres at a speed of 42 km/h.

9) Calculate the time taken to go 630 centimetres at a speed of 18 cm/s.

10) Calculate the time taken to go 100 metres at a speed of 10 m/s.

11) How many hours does it take to go 705 miles at 47 mph?

12) A motor boat has a speed of 4 mph. How many hours does it take to go 24 miles from Lulworth to Bournemouth?

13) A motor boat has a speed of 8 mph. How many hours does it take to go 32 miles from Swanage to Ventnor?

14) A motor boat has a speed of 5 mph. How many hours does it take to go 60 miles round the Isle of Wight?

15) Calculate the time taken (in hours and minutes) to go 150 miles at an average speed of 60 mph.

16) Calculate the time taken (in hours and minutes) to go 44 km at an average speed of 16 km/h.

17) Calculate the time taken (in hours and minutes) to go 350 km at an average speed of 56 km/h.

18) Sasha drives 180 miles at an average speed of 40 mph. How long will her journey take her?

Exercise 4 (Mixture)

1) Find the average speed for each of these journeys.

a) Shaun drives 245 miles in 7 hours

b) An aircraft flies 1125 kilometres in 1 hour 15 minutes

c) Sarah drives 171 kilometres in 4 hours 45 minutes.

2) Calculate the time taken (in hours and minutes) for each of the following journeys.

a) 132 km at an average speed of 12 km/h

b) 351 miles at an average speed of 52 mph

c) 95 km at an average speed of 38 km/h.

3) Calculate the distance travelled in journeys whose times and average speeds are:

a) 4 hours, 69 mph

b) 3 hours 15 minutes, 64 km/h

c) 5 hours 30 minutes, 92 km/h.

4) A and B are two aircraft.

Aircraft A flies a distance of 962 miles in 2 hours.

Aircraft B flies a distance of 1644 miles in 3·5 hours.

Calculate the average speed of each aircraft, and say which one flew faster, on average.

5) A freight train travels at a steady speed of 35 mph.

a) Calculate the time taken, in hours, to travel a distance of 168 miles.

Give the answer in decimals.

b) Change your answer to hours and minutes.

6) At a constant speed of 13 m/s, how far will a racing bike go in

a) 10 seconds **b)** 1 minute?

7) A woman goes on a country walk. She covers 18 miles in 4 hours, at a steady speed. What is her speed in miles per hour?

8) A train's average speed for a 450 mile journey is 90 mph.
How long does the journey take?

9) A coach starts from Bournemouth at 7.30 am and arrives in York at 2.30 pm.

a) How long does the journey take?

b) From Bournemouth to York is 252 miles.
What is the average speed of the coach?

10) The 1045 train leaving London is due at Preston at 1315, at Carlisle at 1420 and at Glasgow at 1545. At Preston this train is 17 minutes late. By Carlisle it has made up 10 minutes.

a) Write down the actual arrival times of the train at Preston and Carlisle.

b) At what average speed would the train have to travel from Carlisle to Glasgow, a distance of 156 km, to arrive on time?

11) Camilla leaves London at 8.55 am to drive to Truro in Cornwall, a distance of 450 kilometres. If she averages a speed of 60 km/h, when will she arrive in Truro?

12) A high speed train travels from Hamburg to Munich in Germany. The train leaves at 2215 hours and travels at an average speed of 140 km/h. If the train arrives in Hamburg at 0400 hours the following morning, find the distance it travels.

13) William drives coaches. One morning he drove from 9.50 am until 11.35 am without stopping. When he checked his trip counter, he discovered that he had travelled 112 miles. Calculate his average speed for the drive.