

## Distance, Speed & Time Revision Exercise

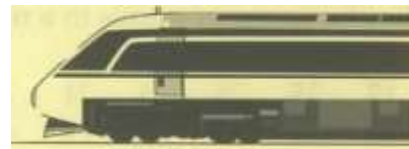
- 1) Here is a part of a French Railway time-table for a high-speed train.

Distance from Paris (km)		
0	Paris	Depart 1649
512	Lyon	Depart 1900
617	Valence	Depart 1955
742	Avignon	Depart 2051
863	Marseille	Arrive 2144



- How many kilometres is it from Valence to Marseille?
- Calculate the journey time from Valence to Marseille.
- Find the speed of the train from Valence to Marseille.  
Round your answer to the nearest kilometre per hour.

- 2) A night train from London to Edinburgh leaves at 2321 and arrives at 0651.



- How long does the train journey take?
- The distance from London to Edinburgh is 644km.  
Find the average speed of the train in kilometres per hour.  
Give your answer correct to one decimal place.

- 3) Amy and Brian travel from Dundee to Stonehaven.  
The distance between Dundee and Stonehaven is 80 kilometres.

Amy takes 1 hour 30 minutes to travel by car.

Brian takes the train which travels at an average speed of 60 kilometres per hour.

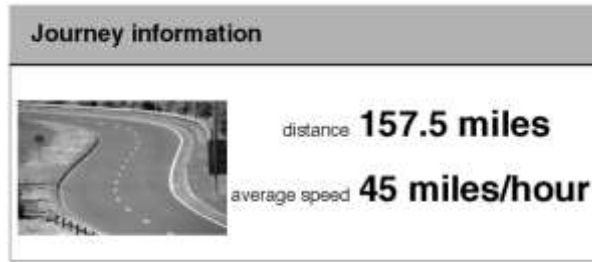
What is the difference between their journey times?



- 4) A Sprinter train travels at an average speed of 144 kilometres per hour.  
The train takes 1 hour 15 minutes to travel between Dingwall and Aberdeen.  
Calculate the distance between Dingwall and Aberdeen.



- 5) Charlie's new car has an on-board computer.  
At the end of a journey the car's computer displays the information below.



Use the information above to calculate the time he has taken for his journey.  
Give your answer in hours and minutes.

- 6) Naveen drives from Dumfries to Manchester.  
A 28 mile part of the journey is affected by roadworks.  
It takes him 40 minutes to drive this part of the journey.  
Calculate his average speed for this part of the journey.



- 7) For safety reasons the speed limit outside Fairfield Park is 20 miles per hour.  
The distance between the speed limit signs outside Fairfield Park is half a mile.  
A van took 2 minutes to travel between these signs.  
Was the van travelling at a safe speed?



- 8) Vicky makes a number of deliveries in her van.  
When the van is moving the on-board computer records the total distance and the average speed.  
Last Wednesday the computer recorded:

distance = 162 miles

average speed = 36 mph

Including stops, Vicky took 6 hours 55 minutes to complete her deliveries.  
For how long was Vicky's van stationary?



- 9) In the Annual Fun Run, Lucy ran 12 kilometres  
in 1 hour 15 minutes.  
Calculate her average speed in kilometres per hour.

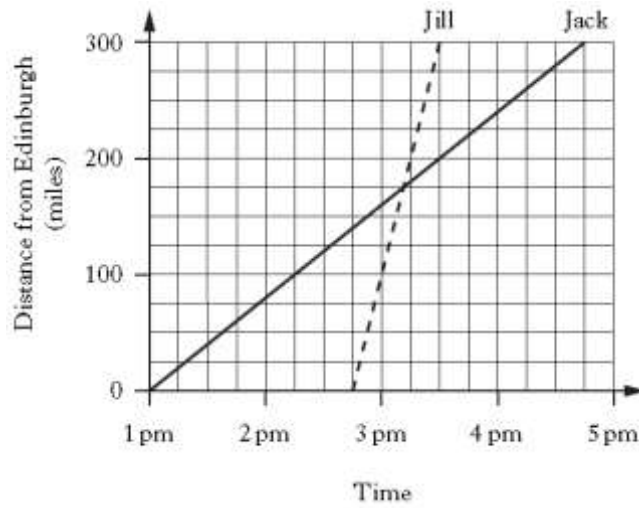


- 10) The Elaxtra car runs on electricity.  
It runs for eight hours before needing to be charged.  
Will the car be able to travel 315 kilometres at an average speed of 42 kilometres per hour before needing to be recharged?



- 11) An aeroplane took off from Edinburgh at 0753 and landed in Shetland at 0908. The distance flown by the aeroplane was 295 miles.  
Calculate the average speed of the aeroplane in miles per hour.
- 12) A car travelling at an average speed of 80 kilometres per hour takes 2 hours 24 minutes for the journey from Dundee to Inverness.  
Calculate the distance between the two towns.
- 13) Chris took part in a track cycling competition.  
He completed 6 laps of a 500 metre track.  
This took him 4 minutes.  
Find his average speed in metres per second.
- 14) Whistler downhill ski course is 3.1 kilometres long.  
Finlay completed the course in 2 minutes 5 seconds.  
Find his average speed in metres per second.
- 15) a) An inter-city coach left Aberdeen at 10.40am and reached Inverness at 1.25pm.  
How long did the journey take?  
b) The average speed of the coach during the journey was 40mph.  
Find the distance between Aberdeen and Inverness.
- 16) An overnight train left London at 2040 and reached Inverness at 0810 the next day.  
The distance travelled by the train was 552 miles.  
Calculate the average speed on the train.
- 17) Ross drove 190 miles from Preston to Edinburgh in 3 hours 30 minutes.  
During the first part of his journey he drove for 2 hours at an average speed of 68 mph.  
Find the average speed in miles per hour for the rest of his journey.

- 18) Jack and Jill travel from Edinburgh to Birmingham.  
Jack travels by train and Jill travels by aeroplane.  
The graph below shows their journeys.



- a) How much sooner than Jack does Jill arrive in Birmingham?  
b) Calculate the average speed, in miles per hour, of Jack's journey.

## ANSWERS

1)a)  $863 - 617 = 246\text{km}$

b)  $1955 \text{ to } 2144 = 1 \text{ hr } 49 \text{ mins}$

c)  $S = \frac{D}{T}$   
 $S = \frac{246}{1.81\dot{6}}$   
 $S = 135\text{kmph}$

2)a)  $2321 \text{ to } 0651 = 7 \frac{1}{2} \text{ hours}$

b)  $S = \frac{D}{T}$   
 $S = \frac{644}{7.5}$   
 $S = 85.9\text{kmph}$

3) Amy 1hr 30min

Brian  $T = \frac{D}{S}$   
 $T = \frac{80}{60}$   
 $T = 1.\dot{3}$   
 $T = 1\text{hr } 20\text{mins}$

Brian is 10 minutes  
faster than Amy

4)  $D = S T$   
 $D = 144 \times 1.25$   
 $D = 180\text{km}$

5)  $T = \frac{D}{S}$   
 $T = \frac{157.5}{45}$   
 $T = 3.5$   
 $T = 3\text{hrs } 30\text{mins}$

6)  $S = \frac{D}{T}$   
 $S = \frac{28}{0.66\dot{6}}$   
 $S = 42\text{mph}$

7)  $S = \frac{D}{T}$   
 $S = \frac{0.5}{0.03\dot{3}}$   
 $S = 15\text{mph}$  The van was travelling at a safe speed.

8)  $T = \frac{D}{S}$   
 $T = \frac{162}{36}$   
 $T = 4.5$   
 $T = 4\text{hrs } 30\text{mins}$  travelling therefore stationary for 2hrs 25mins

9)  $S = \frac{D}{T}$   
 $S = \frac{12}{1.25}$   
 $S = 9.6\text{kmph}$

$$10) \quad T = \frac{D}{S}$$

$$T = \frac{315}{42}$$

$$T = 7.5$$

$T = 7\text{hrs } 30\text{mins}$  The car will be able to complete the journey before being recharged.

$$11) \quad S = \frac{D}{T}$$

$$S = \frac{295}{1.25}$$

$$S = 236\text{mph}$$

$$12) \quad D = ST$$

$$D = 80 \times 2.4$$

$$D = 192\text{km}$$

$$13) \quad S = \frac{D}{T}$$

$$S = \frac{3000}{240}$$

$$S = 12.5 \text{ m/s}$$

$$14) \quad S = \frac{D}{T}$$

$$S = \frac{3100}{125}$$

$$S = 24.8 \text{ m/s}$$

$$15) \quad \text{a) } 2 \text{ hours } 45 \text{ minutes}$$

$$\text{b) } D = ST$$

$$D = 40 \times 2.75$$

$$D = 110 \text{ miles}$$

$$16) \quad S = \frac{D}{T}$$

$$S = \frac{552}{11.5}$$

$$S = 48 \text{ mph}$$

$$17) \quad D = ST$$

$$D = 68 \times 2$$

$$D = 136 \text{ miles} \quad 190 - 136 = 54 \text{ miles left}$$

$$S = \frac{D}{T}$$

$$S = \frac{54}{1.5}$$

$$S = 36 \text{ mph}$$

$$18)\text{a) } 1\text{hr } 15\text{mins}$$

$$\text{b) } S = \frac{D}{T}$$

$$S = \frac{300}{3.75}$$

$$S = 80 \text{ mph}$$