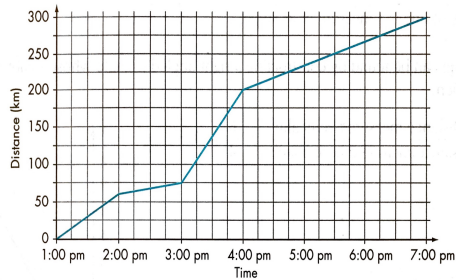


Speed Time Distance Graphs

2 James was travelling to Cornwall on his holidays. This distance-time graph illustrates his journey.



- a His fastest speed was on the motorway.
 - i How much motorway did he use?
 - ii What was his average speed on the motorway?
- b i When did he travel the slowest?
 - ii What was his slowest average speed?

a) i) $200 - 75 = 125 \text{ km}$

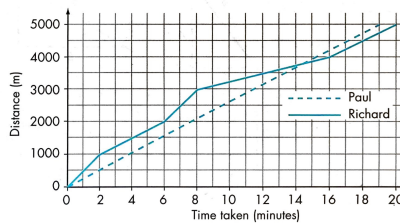
ii) $\frac{125}{1} = 125 \text{ km/hr}$

b) i) Slowest between 2pm and 3pm

ii) $75 - 60 = 15 \text{ km/hr}$

3 Richard and Paul had a 5000 m race. The distance covered is illustrated below.

- a Paul ran a steady race. What is his average speed in:
 - i metres per minute?
 - ii km/h?
- b Richard ran in spurts. What was his quickest average speed?
- c Who won the race and by how much?



a) i) $\frac{5000}{19} = 263 \text{ m/min}$

ii) $263 \times 60 \div 1000 = 15.8 \text{ km/hr}$

or $5 \div \frac{19}{60}$

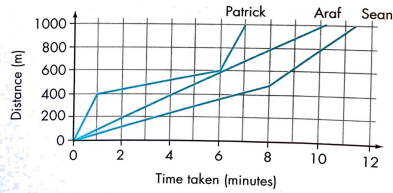
$= 5 \times \frac{60}{19} = 15.8 \text{ km/h}$

b) $\frac{1000}{2} = 500 \text{ m/min}$

c) Paul won by 1 min or by 250m

4 Three friends, Patrick, Araf and Sean, ran a 1000 metres race. The race is illustrated on the distance-time graph below.

- a Describe the race of each friend.
- b i What is the average speed of Araf in m/s?
- ii What is this speed in km/h?



a) Patrick ran fast, slow, fast and won
 Araf ran steady speed and came second
 Sean ran slow then faster but came last.

11