

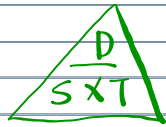
Motion

"Dad's silly triangle"



D - Distance (m)
 S - Speed (m/s, ms⁻¹) 'average speed'
 T - Time (s) 'decimal time'

Q. What is the average speed of a car that begins a journey at 9:25 am. and ends the journey at 10:55 am. after travelling 75 km?



D = 75 km
 S = ?
 T = 10:55 - 9:25 = 1:30 = 1.5 hours

$$S = \frac{D}{T} = \frac{75}{1.5} = 50 \text{ km/h}$$

10.55 10 (55)

10.55 decimal

10:55 hours:mins.
 = 10'55' = 10.916

0.999


Examination Questions

16 A cyclist moves 20 metres along a track in 4 seconds.

(a) In the table write the letter **S** beside the **speed** of the cyclist.

(b) Write the letter **D** beside the **distance** the cyclist will travel in 2 seconds.

(JC, OL, 2009)

5 m/s	
80 m/s	
10 m/s	
40 m/s	

▲ Fig 33.7

a)



$$D = 20 \text{ m}$$

$$S = ?$$

$$T = 4 \text{ s}$$

$$S = \frac{D}{T} = \frac{20}{4} = 5 \text{ m/s}$$

b)

$$S = 5 \text{ m/s}$$

$$T = 2 \text{ s}$$

$$D = ?$$

$$D = S \times T = 5(2) = 10 \text{ m}$$