SPEED AND VELOCITY

SPEED is the DISTANCE travelled in UNIT TIME.

Unit time can be one hour or one second.

VELOCITY is the DISTANCE travelled in a CERTAIN DIRECTION in UNIT TIME.

Both are calculated using the following equation:

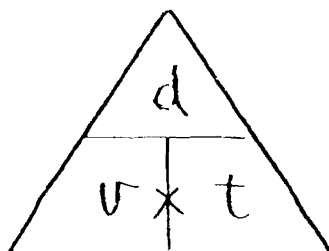$$SPEED = \frac{DISTANCE}{TIME}$$

This is sometimes written as

$$v = \frac{d}{t}$$

Where; v stands for   *velocity*
         d stands for   *distance*
         t stands for   *time*

UNITS: VELOCITY/SPEED   can be in   m/s or cm/s cr km/h
         DISTANCE   can be in   m or cm or km
         TIME   can be in   seconds (s) or hours (h)

The only thing you have to make sure of is that if the velocity is in m/s then the distance must be in metres and time must be in seconds, similarly if you are working in cm instead of m. If the velocity is in km/h then the distance must be in km and the time must be in hours.

THE TRIANGLE

	SPEED	DISTANCE	TIME	WORKING OUT	ANSWER (WITH UNITS)
1	?	20 km	5 h		
2	?	150 m	30 s		
3	6 m/s	?	2 s		
4	4 km/h	22 km	?		
5	0.5 cm/s	16 cm	?		
6	?	400 cm	0.2 s		
7	300 m/s	?	4.5 s		

8. A runner takes 20 min to run 10 000 m. What is his speed in km/h?

9. A bullet travels at 350 m/s. The distance to the target is 77 m. What is the time interval between the gun being fired and the bullet hitting the target?

10. The speed of light is 300 000 km/s. If it takes 8.5 minutes for light to reach us from the sun, how far away is the sun?