

Equation triangles

You need to memorise various equations. You can remember them in words or in symbols. For example, the equation that connects speed with distance and time is;

In words: speed = distance divided by time

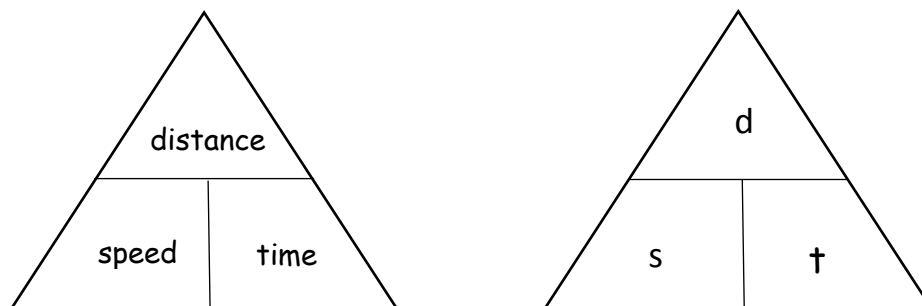
In symbols: $s = d \div t$ or $s = d / t$

So provided that you know the distance and time, you can just do the division to work out the speed.

Unfortunately, this is not just one equation but three different equations because we can change the subject of the equation (the quantity in the equation that is on its own on the left-hand side). In this example, the three different arrangements are;

In words...	In symbols...
speed = distance divided by time	$s = d \div t$ or $s = d / t$
time = distance divided by speed	$t = d \div s$ or $t = d / s$
distance = speed multiplied by time	$d = s \times t$ (or $d = t \times s$)

This is a lot to remember so it can be useful to put equations into a triangle then use a method that works to solve every equation (regardless of what part of the equation you don't know). The triangle for speed, distance and time looks like this;



The method for using an equation triangle is...

- 1) **List** the two things you are told in the question **and** the one thing you need to find out.
- 2) Recall the triangle that applies to this situation and **draw the triangle**.
- 3) Put your **finger** over the thing you have to find out (the thing you don't yet know).
- 4) Look at the **positions** of the things you are left with;
 - a. If the things you know are side by side, then **multiply** them together.
 - b. If one thing is above the other thing, then **divide** them.
(divide the thing on top by the thing underneath; top divided by bottom).
- 5) Write down the **answer**.