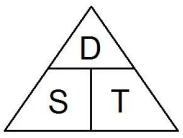
The DST Triangle

This topic is on the Junior Cycle Science Programme and you will be working on it right through the next 3 years. It's tricky enough so if you understand it for the most part now you are doing very well indeed.



So the rules for calculating distance, speed or time are as follows:

1. Draw out your DST triangle - the way I remember the order of the letters is that they are in alphabetical order from the top.. D then S then T
2. Now read your question and figure out what it is you are looking for? Are you being asked to find the distance? Put your thumb over the D.. are you being asked to find speed? Put your thumb over the S.. are you being asked to find time? Put your thumb over the T. This then gives you your calculation
3. To find distance we put our thumb over the d and then we see the formula is ST - from our variables lesson we know 2 letters beside each other means MULTIPLY so **Distance = Speed x Time**
4. To find speed we put our thumb over the s and we see the formula

   $d/_{t.}$

   From fractions we know one number over another number means divide so **Speed = Distance ÷ Time**
5. To find time we put our thumb over the t and we see the formula

   $d/_{s}$

   From fractions we know one number over another number means divide so **Time = Distance ÷ Speed**

NOW TRY THESE

a. **A car is travelling at 45km/hr. How far will it go in 4 hours?**
   What am I looking for? How FAR is distance
   Cover the d on my triangle and I see the formula ST
   Speed x Time
   Speed is 45km/hr
   Time = 4 hours
   45 x 4 = 180
   The car will travel 180km in 4 hours

b. **A cross country skier is skiing at 60km/hr. How long will it take her to cover 255km?**
   What am I looking for? How LONG is time
   Cover the t on my triangle and I see the formula $^{d}/_{s}$
   Distance ÷ Speed
   Speed is 60km/hr
   Distance is 255km
   255 ÷ 60 = 4.25
   It will take her 4.25 hours or 4¼ hours

c. **A motorcyclist covers 90km in 45 minutes. What is his speed in km/ hr**
   What am I looking for? Speed
   Cover the s on my triangle and I see the formula $^{d}/_{t}$
   Distance ÷ Time
   Distance is 90km
   Time is 45 minutes.
   Now be careful here - how is speed measured? In km per hour. Is our time given in hours? No - so convert it. 45 minutes is 0.75 hours
   90 ÷ 0.75 = 120
   His speed is 120km/hr

These challenges are very important. Completing these tasks will show me whether or not you have a proper understanding of this concept.

1. Create 3 word problems - one solving for distance, one solving for time and one solving for speed. Include the solution, explaining to me exactly how you worked it out
2. Write a persuasive summary in 3-5 points as to which video you preferred (Tec Maths Channel or Positive Maths) and why it better helped you to understand this concept.

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