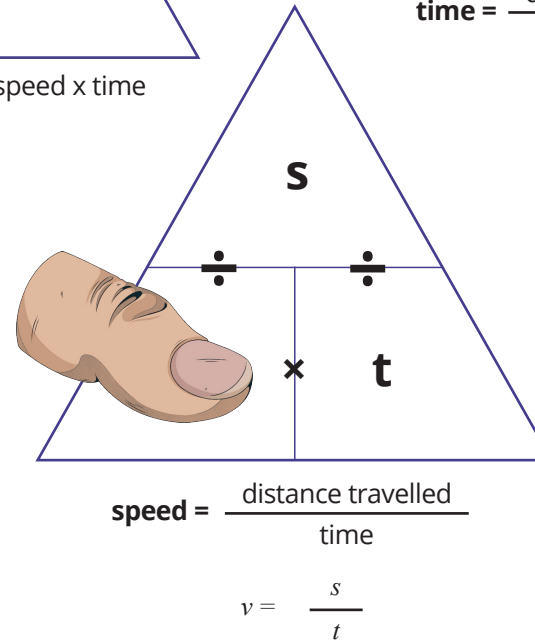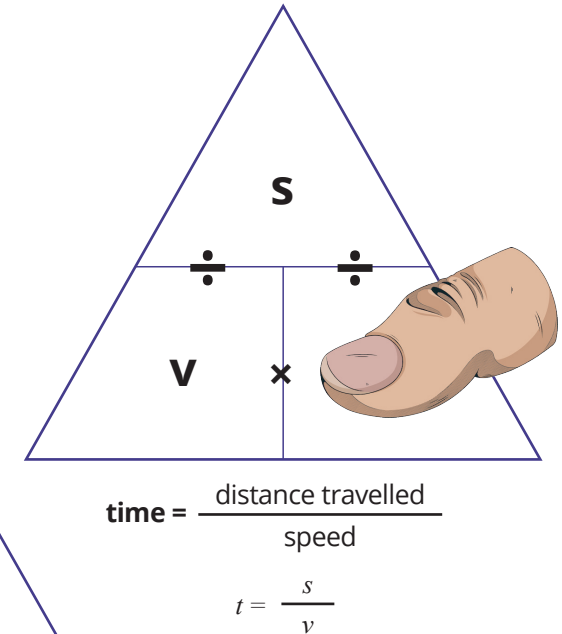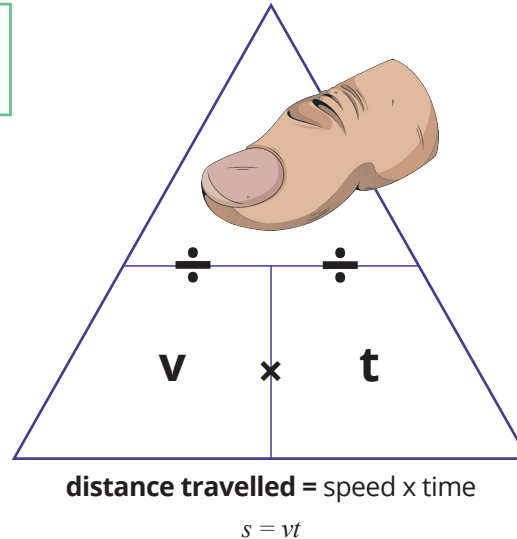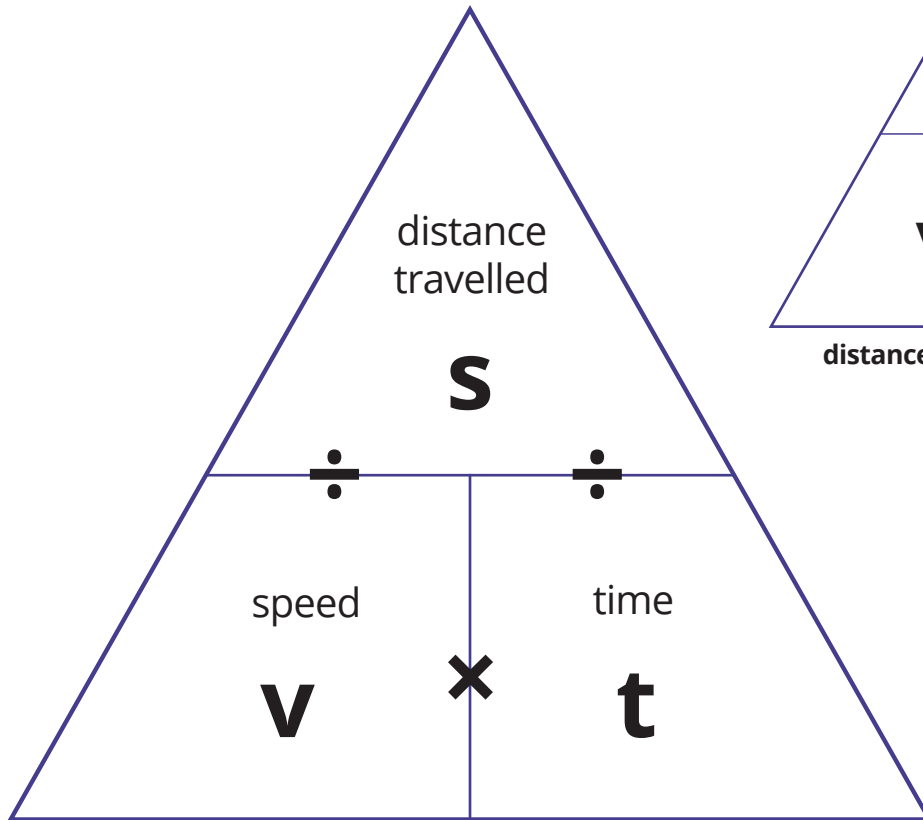# Calculating Distance Travelled, Speed and Time

Use the formula triangle to help you convert between distance travelled, speed and time.

Cover the part you want to find. This tells you which calculation to perform.

distance
travelled

s

$\div$ $\div$

speed $\qquad$ time

v $\times$ t

$\div$ $\div$

v $\times$ t

distance travelled = speed x time

$s = vt$

s

$\div$ $\div$

v $\times$

time = $\dfrac{\text{distance travelled}}{\text{speed}}$

$t = \dfrac{s}{v}$

s

$\div$ $\div$

$\times$ t

speed = $\dfrac{\text{distance travelled}}{\text{time}}$

$v = \dfrac{s}{t}$

Calculating Speed **Answers**

1. $\dfrac{1700\text{m}}{179\text{s}}$ = **9.50m/s**

2. $\dfrac{402\text{m}}{22\text{s}}$ = **18.27m/s**

3. $\dfrac{2541 \text{ miles}}{4.5 \text{ hours}}$ = **564.67mph**

4. 1 hour = 60 × 60 = 3600s, so 4.5 hours = 4.5 × 3600 = 16 200s

   $\dfrac{150\text{m}}{16\ 200\text{s}}$ = **0.01m/s**

5. 30 minutes = 0.5hours

   $\dfrac{16 \text{ miles}}{0.5 \text{ hours}}$ = **32.00mph**

Calculating Speed

Answer the questions below. Show your working out and remember to include units. Give each answer to **two** decimal places.

1. A man rides his bicycle to work each day. He lives 1700 metres from work, and it takes him 179 seconds. Calculate his average speed.

_____

_____

_____

2. A horse takes 22 seconds to win a 2 furlong (402m) race. Calculate the average speed of the winning horse.

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3. An aeroplane travels 2541 miles from the UK to Tenerife. The trip takes 4.5 hours. Calculate the average speed of the plane.

_____

_____

_____

4. A snail travels 150m across a park. This takes the snail 4.5 hours. Calculate the average speed of the snail.

_____

_____

_____

5. A tour boat travels 16 miles around an island. The trip takes 30 minutes. Calculate the average speed of the boat.

_____

_____

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