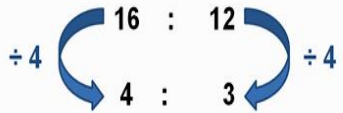


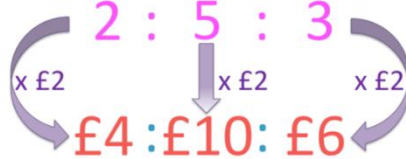

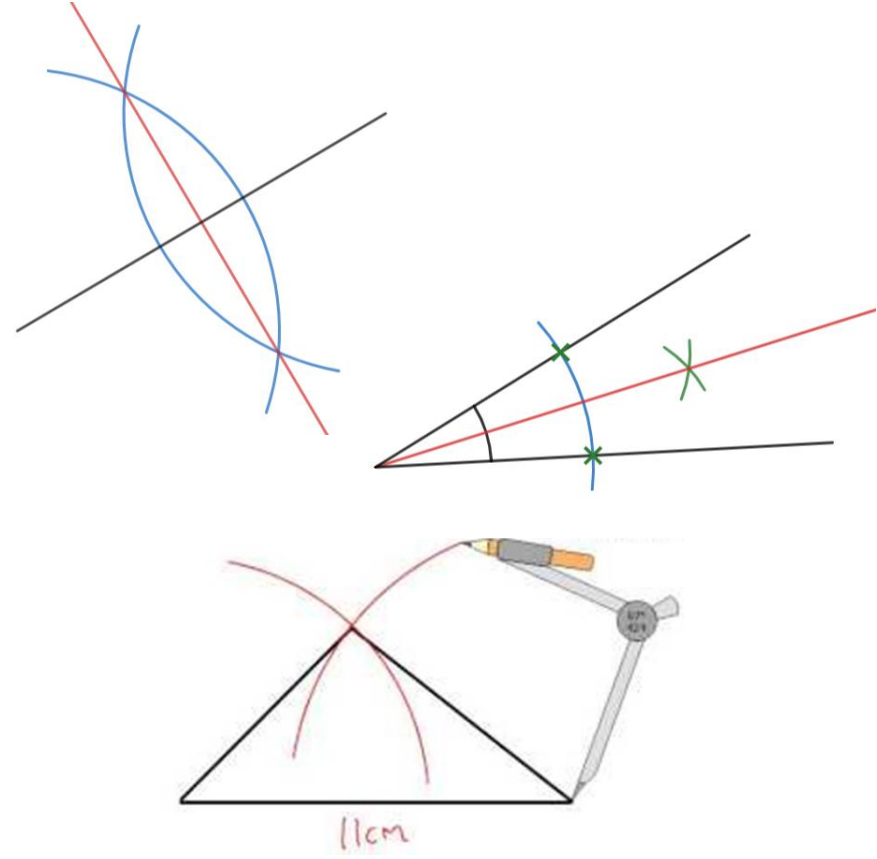
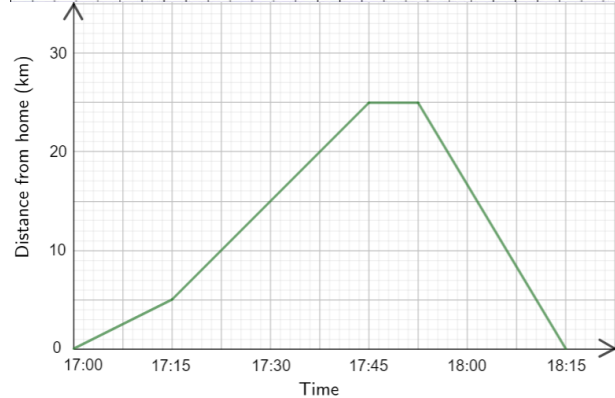
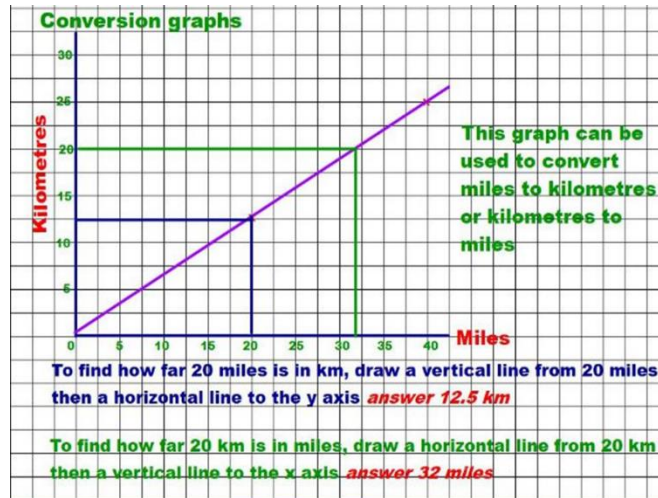


<p>Maths Subject/Topic: Ratio and Proportion</p> <p>Key ideas: Simplify and share into a given ratio</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>$\div 4$ $16 : 12$ $\div 4$ $4 : 3$</p> </div> <div style="text-align: center;">  <p>Direct proportion</p> </div> <div style="text-align: center;">  <p>Inverse proportion</p> </div> </div> <p>The simplified Ratio Answer is 4 : 3 ✓</p> <p style="text-align: center;">Share £20 in the ratio 2:5:3</p> <ol style="list-style-type: none"> 1) Find the total number of parts $2 + 5 + 3 = 10$ 2) Divide the amount by the total number of parts $£20 \div 10 = £2 = 1 \text{ part}$ 3) Multiply each number in the ratio by the value of 1 part <div style="text-align: center;">  <p>$2 : 5 : 3$ $\times £2$ $\times £2$ $\times £2$ $£4 : £10 : £6$</p> <p>$\frac{4}{6}$ $4 : 2$ $\frac{2}{6}$</p>  </div>	<p>Subject/Topic: Constructions and Loci</p> <p>Key ideas: Use a ruler and compasses to draw accurate diagrams</p> <div style="text-align: center;">  </div>
<p>Keywords /Key Language:</p>	<p>Keywords /Key Language:</p>
<p>Ratio Proportion Direct Inverse Simplify</p>	<p>Construct Bisector Perpendicular Scale Measure Equidistant</p>

Maths Subject/Topic: Graphs

Key ideas: Use a graph to convert between units and recognise travel graphs



Keywords /Key Language:

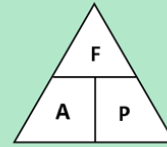
convert
units
equivalence
rate of change

real life graph
distance/displacement
speed/velocity

Subject/Topic: Compound Measures

Key ideas: Know and solve problems using compound measures

Force Area Pressure

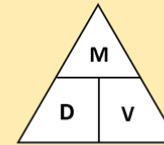


$$\text{Pressure} = \frac{\text{Force}}{\text{Area}}$$

$$\text{Area} = \frac{\text{Force}}{\text{Pressure}}$$

$$\text{Force} = \text{Area} \times \text{Pressure}$$

Mass Density Volume

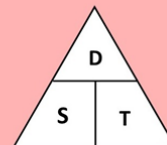


$$\text{Volume} = \frac{\text{Mass}}{\text{Density}}$$

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

$$\text{Mass} = \text{Density} \times \text{Volume}$$

Distance Speed Time



$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$\text{Distance} = \text{Speed} \times \text{Time}$$

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

Keywords /Key Language:

compound measures
acceleration
density
Mass
Volume
Pressure

Maths Subject/Topic: Ratio and Proportion Questions

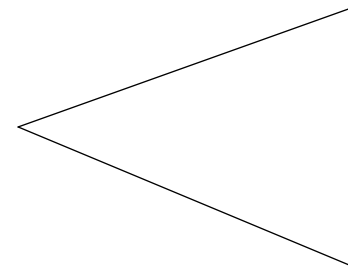
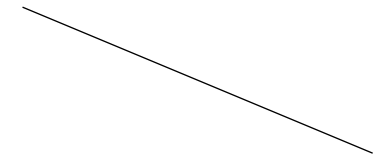
There are 12 pens in a box. 20 of the pens are green ink, and the rest are red ink.
Write the ratio of the number of green pens to the number of red pens in simplest form.

Share £500 in the ratio 3:7

James and Freddie share some sweets in the ratio 5:6. What fraction of the sweets does Freddie receive?

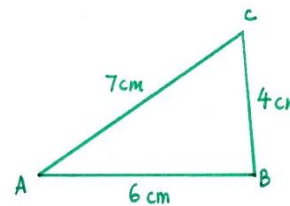
Subject/Topic: Constructions and Loci Questions

Construct a perpendicular bisector

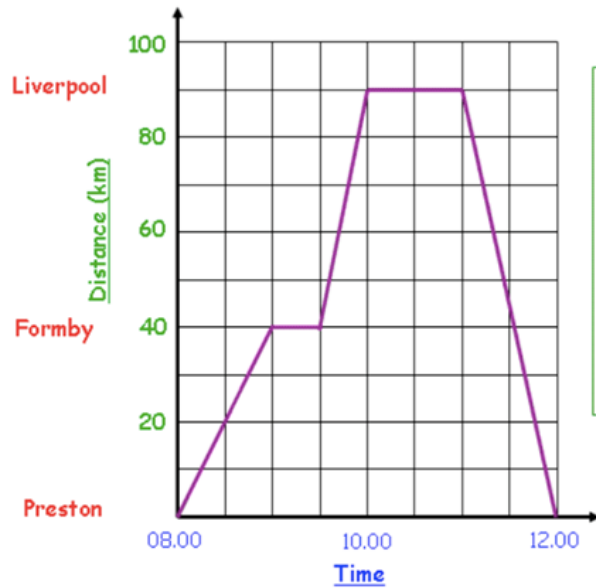


Bisect this angle

Construct this triangle

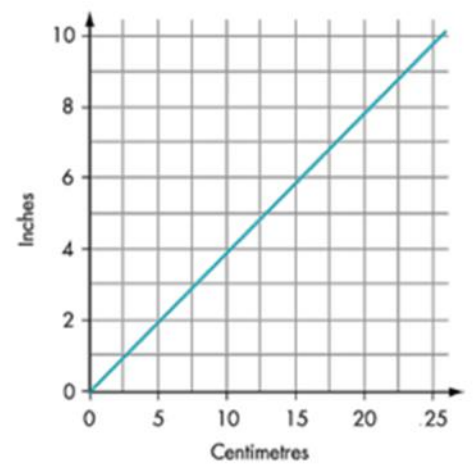


Maths Subject/Topic: Graphs
Questions



The graph on the left shows a journey made by a family in a car between Preston, Formby and Liverpool. Look at the graph and then answer the following questions:

- (a) What time did the family arrive in Liverpool?
- (b) What is the distance from Formby to Liverpool?
- (c) How long did the family spend not moving?
- (d) What was the average speed on the journey home?



- a Use the graph to make an approximate conversion of:
 - i 4 in to centimetres
 - ii 9 in to centimetres
 - iii 5 cm to inches
 - iv 22 cm to inches.
- b Approximately how many centimetres are equivalent to 1 in?
- c Explain how you could use the graph to convert 18 into centimetres.

Maths Subject/Topic: Compound Measures
Questions

Josh and Gary are doing a 36km sponsored walk.

- (a) Josh can walk at 6km per hour. How long will he take to finish the walk?
..... [1]
- (b) Gary can walk at 5km per hour. How far will he still have left to walk when Josh finishes?
..... [2]

A silver plate has a mass of 11.5 kg.
The density of silver is 17.4 g/cm³
Work out the volume of the silver plate.

Give your answer correct to 3 significant figures.