Name: _____ 5-a-day Foundation Plus

30th October

Corbettmaths

Work out

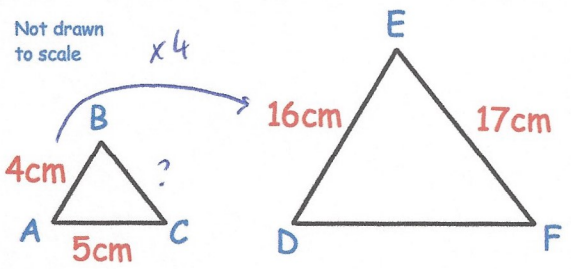
$$1\frac{4}{7} \div 1\frac{1}{4}$$

Give your answer as a mixed number.

$\frac{11}{7} \div \frac{5}{4}$

$\frac{11}{7} \times \frac{4}{5} = \frac{44}{35}$

$= 1\frac{9}{35}$



Triangles ABC and DEF are similar.
AB = 4cm AC = 5cm
DE = 16cm EF = 17cm.

Work out the length of BC.

$17 \div 4 = 4.25\text{cm}$

Solve these simultaneous equations

$2x - 4y = 4$ x 3

$5x - 3y = 24$ x 4

$6x - 12y = 12$

$20x - 12y = 96$

$12 - 4y = 4$

$y = 2$

$20x - 12y = 96$

$6x - 12y = 12$ subtract

$14x = 84$

$x = 6$ $y = 2$

90g of lead and 40g of tin are mixed to make an alloy.

The density of lead is 11g/cm³
The density of tin is 7g/cm³

d m v

Work out the volume of lead used in the alloy.

$v = \frac{m}{d} = \frac{90}{11} = 8.1818..\text{cm}^3$

Work out the volume of tin used in the alloy.

$v = \frac{m}{d} = \frac{40}{7} = 5.714..\text{cm}^3$

What is the density of the alloy?

$d = \frac{m}{v} = \frac{130}{13.896..}$

$d = 9.35514\text{ g/cm}^3$