

14th December



Corbettmaths

Write as a single power of 5.

$$\frac{5^3 \times 5^{11}}{5^2}$$

$$\frac{5^{14}}{5^2}$$

$$5^{12}$$

Write down the exact value of Sin 180°

0

Write down the exact value of Tan 45°

1

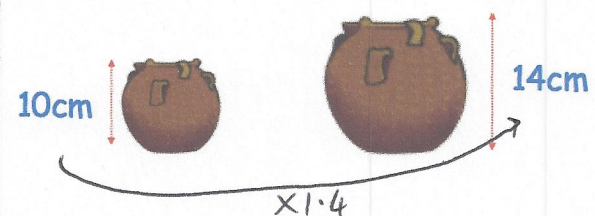
Mrs Hampton is potting plants. She is using two mathematically similar pots, the smaller is 10cm tall and the larger 14cm tall.

She has two bags of soil, each containing 30 litres of soil.

With the first bag, Mrs Hampton fills 20 small pots using all of the soil in the bag.

$$30 \div 20 = 1.5 \text{ L per pot}$$

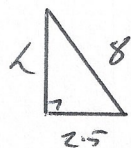
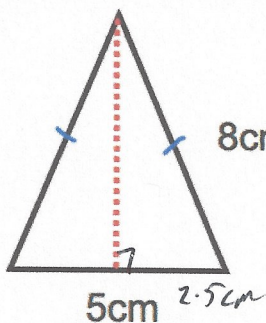
$$1.5 \times 1.4^3 = 4.116 \text{ L}$$



How many large pots can be filled completely using the second bag of soil?

$$30 \div 4.116 = 7.28 \dots$$

7



Calculate the height of the isosceles triangle.

$$h^2 + 2.5^2 = 8^2$$

$$h^2 + 6.25 = 64$$

$$h^2 = 57.75$$

$$h = 7.599 \text{ cm}$$