



Gardening

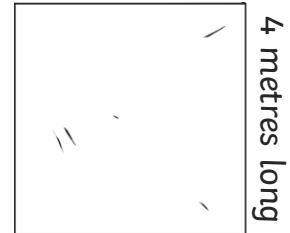
I can solve problems using my knowledge of square and cube numbers.



Help Geoff to solve these gardening problems.

Draw diagrams on the back of the sheet to help you.

1. Gardener Geoff is building a square patio.
If the length of the patio is 4 metres, how wide is it?



2. What is the area of a square patio which is 4 metres long?

$$4^2 = 4 \times 4 = \text{_____ m}^2$$

3. What is the area of a square lawn which is 40 metres long?

4. What is the length of a square lawn with an area of 144m^2 ?

5. How wide is a square patio with an area of 121m^2 ?

6. How much soil will Geoff need to fill a cube-shaped planter 50cm high?

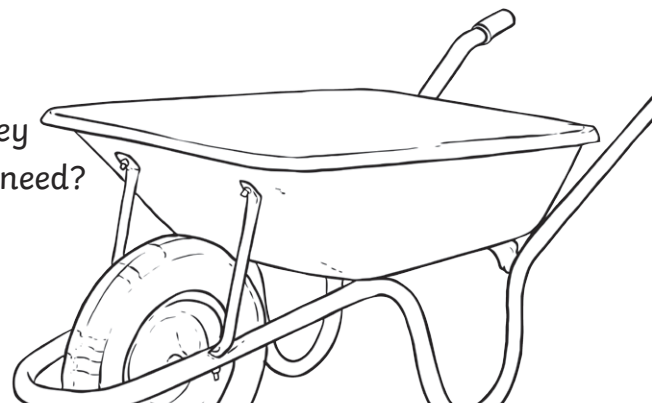
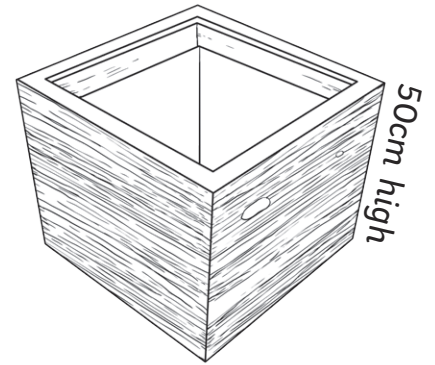
$$50^3 = 50 \times 50 \times 50 = \text{_____ cm}^3 \text{ of soil}$$

7. Geoff has 216m^3 of soil left. Will there be enough to fill a planter 8 metres wide?

8. How much soil will Geoff need to fill a cube-shaped planter 60cm high?

9. 1000cm^3 of soil completely fills a cube-shaped mini planter on the wall in Geoff's garden. How high is the planter?

10. Geoff has 2 cube-shaped planters left to fill. They are both 2 metres wide. How much soil will he need?





Gardening Answers

Question	Answer
1. Gardener Geoff is building a square patio. If the length of the patio is 4 metres, how wide is it?	4m
2. What is the area of a square patio which is 4 metres long?	$4^2 = 4 \times 4 = 16\text{m}^2$
3. What is the area of a square lawn which is 40 metres long?	1600m^2
4. What is the length of a square lawn with an area of 144m^2 ?	12m
5. How wide is a square patio with an area of 121m^2 ?	11m
6. How much soil will Geoff need to fill a cube-shaped planter 50cm high?	$50^3 = 50 \times 50 \times 50 = 125\ 000\text{cm}^3$ of soil
7. Geoff has 216m^3 of soil left. Will there be enough to fill a planter 8 metres wide?	No, he would need 512m^3
8. How much soil will Geoff need to fill a cube-shaped planter 60cm high?	$216\ 000\text{cm}^3$
9. 1000cm^3 of soil completely fills a cube-shaped mini planter on the wall in Geoff's garden. How high is the planter?	10cm

10. Geoff has 2 cube-shaped planters left to fill. They are both 2 metres wide. How much soil will he need?
16m^3



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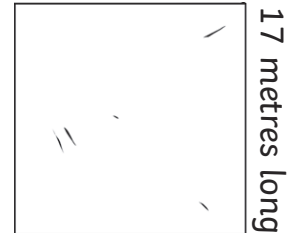
I can solve problems using my knowledge of square and cube numbers.



Help Geoff to solve these gardening problems.

Draw diagrams on the back of the sheet to help you.

1. Gardener Geoff is building a square patio.
If the length of the patio is 17 metres, how wide is it?



2. What is the area of a square patio which is 17 metres long?

$$17^2 = 17 \times 17 = \text{_____} \text{ m}^2$$

3. What is the area of a square lawn which is 25 metres long?

4. What is the length of a square lawn with an area of 169m^2 ?

5. How wide is a square patio with an area of 225m^2 ?

6. How much soil will Geoff need to fill a cube-shaped planter 65cm high?

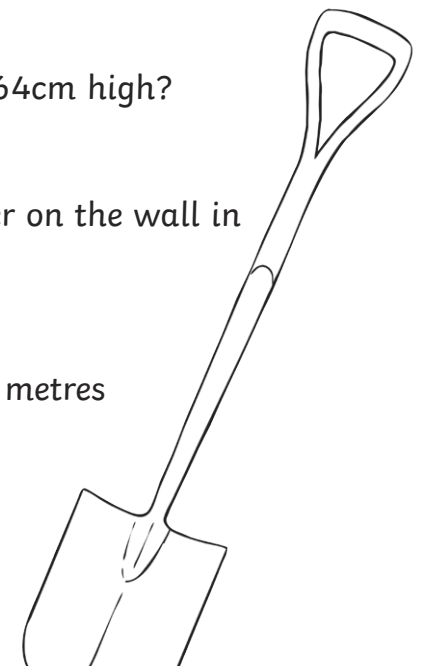
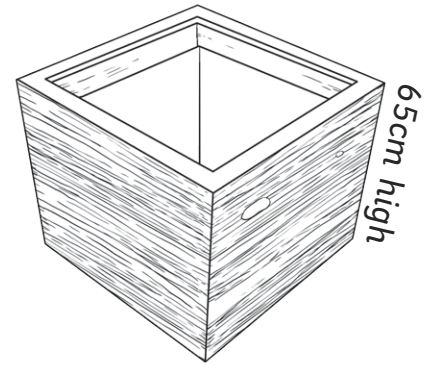
$$65^3 = 65 \times 65 \times 65 = \text{_____} \text{ cm}^3 \text{ of soil}$$

7. Geoff has 216m^3 of soil left. Will there be enough to fill a planter 9 metres wide?

8. How much soil will Geoff need to fill a cube-shaped planter 64cm high?

9. $15\ 625\text{cm}^3$ of soil completely fills a cube-shaped mini planter on the wall in Geoff's garden. How high is the planter?

10. Geoff has 2 cube-shaped planters left to fill. They are both 4 metres wide. How much soil will he need?





Gardening Answers

Question	Answer
1. Gardener Geoff is building a square patio. If the length of the patio is 17 metres, how wide is it?	17m
2. What is the area of a square patio which is 17 metres long?	$17^2 = 17 \times 17 = \mathbf{289m^2}$
3. What is the area of a square lawn which is 25 metres long?	625m²
4. What is the length of a square lawn with an area of 169m ² ?	13m
5. How wide is a square patio with an area of 225m ² ?	15m
6. How much soil will Geoff need to fill a cube-shaped planter 65cm high?	$65^3 = 65 \times 65 \times 65 = \mathbf{274\ 625cm^3}$ of soil
7. Geoff has 216m ³ of soil left. Will there be enough to fill a planter 9 metres wide?	No, he would need 729m³.
8. How much soil will Geoff need to fill a cube-shaped planter 64cm high?	262 144m³
9. 15 625cm ³ of soil completely fills a cube-shaped mini planter on the wall in Geoff's garden. How high is the planter?	25cm

10. Geoff has 2 cube-shaped planters left to fill. They are both 4 metres wide. How much soil will he need?
128m³



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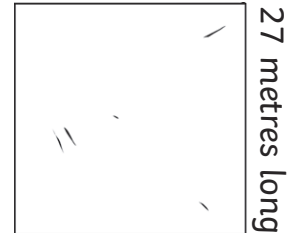
I can solve problems using my knowledge of square and cube numbers.



Help Geoff to solve these gardening problems.

Draw diagrams on the back of the sheet to help you.

- Gardener Geoff is building a square patio. If the length of the patio is 27 metres, how wide is it?



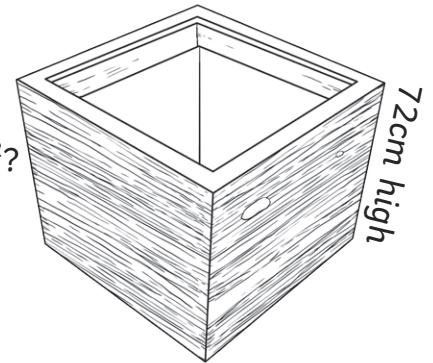
- What is the area of a square patio which is 35 metres long?

$35^2 = 35 \times 35 = \text{_____} \text{ m}^2$

- What is the area of a square lawn which is 65 metres long?

- What is the length of a square lawn with an area of 1225m^2 ?

- How wide is a square patio with an area of 1764m^2 ?



- How much soil will Geoff need to fill a cube-shaped planter 72cm high?

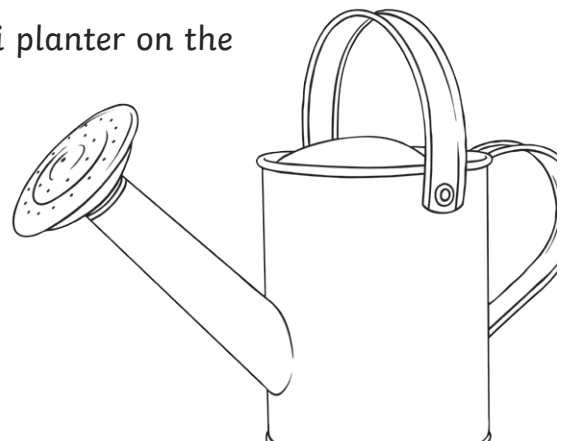
$72^3 = 72 \times 72 \times 72 = \text{_____} \text{ cm}^3$ of soil

- Geoff has $20\ 160\text{cm}^3$ of soil left. Will there be enough to fill a planter 0.25 metres wide? (tip: try converting it into centimetres first).

- How much soil will Geoff need to fill a cube-shaped planter 76cm high?

- $27\ 000\text{cm}^3$ of soil completely fills a cube-shaped mini planter on the wall in Geoff's garden. How high is the planter?

- Geoff has 2 cube-shaped planters left to fill. They are both 3 metres wide. How much soil will he need?





Gardening Answers

Question	Answer
1. Gardener Geoff is building a square patio. If the length of the patio is 27 metres, how wide is it?	27m
2. What is the area of a square patio which is 35 metres long?	$35^2 = 35 \times 35 = 1225\text{m}^2$
3. What is the area of a square lawn which is 65 metres long?	4225m²
4. What is the length of a square lawn with an area of 1225m ² ?	35m
5. How wide is a square patio with an area of 1764m ² ?	42m
6. How much soil will Geoff need to fill a cube-shaped planter 72cm high?	$72^3 = 72 \times 72 \times 72 = 373\,248\text{cm}^3$ of soil
7. Geoff has 20 160cm ³ of soil left. Will there be enough to fill a planter 0.25 metres wide? (tip: try converting it into centimetres first).	Yes, he will only need 15 625cm³ of soil.
8. How much soil will Geoff need to fill a cube-shaped planter 76cm high?	438 976cm³

9. 27 000cm ³ of soil completely fills a cube-shaped mini planter on the wall in Geoff's garden. How high is the planter?	30cm
10. Geoff has 2 cube-shaped planters left to fill. They are both 3 metres wide. How much soil will he need?	54m³