$\frac{1}{2}$  Express  $1\frac{1}{2}$  as a percentage.

6 Write one-ninth as a decimal to

b the nearest whole number.

12 Express 28 as a product of prime numbers by filling in the blanks.

1 If 10 bananas cost £2.40, then

3 8 pints = 1 gallon. 40 pints =

6 Find the cost of 2.25kg at

30p per  $\frac{1}{2}$ kg.

2 How long will it take to pay £27.50

5 Pythagoras died in 497 BCE aged 85. In what year was he born?

7. A box is 5cm wide, 8cm long and

35cm high. Find its volume.

9 Estimate to the nearest 100.

6358 ÷ 7.8

11 5q - 40 = 0

one will cost

at £2.50 per week?

4  $2\frac{3}{4}$  gallons = pints

10 If a = 3, evaluate  $5a^2$ .

5 What is 150% of 3?

2 decimal places.

 $(7 (1.25 + 5) + (1.25 \times 5) =$ 

8 Approximate 69.802 to a 2 decimal places

1 243 ÷ 27 =

2 24 - (15 - 3) =

 $3 \cdot 11.01 \times 10^2 =$ 

Answer

a 69.80 **b**. 70

so q =

150%

4.5

0.11

12.5

800

45

24p

11wk

22pt

5 gallons

582 BCE

1400cm<sup>3</sup>

 $2 \times 2 \times 7 = 28$ 

Answer

£1.35

nswer

The diagram shows a plot of land with a house and garden.

Answer

The table below is part of a spreadsheet that Patrick used to calculate the squares and cubes of the numbers 1 to 10. Some of the values in the table are missing.

	А	В	С
1	Number	Square	Cube
2	1	1	• • • • • • • • • • • • • • • • • • •
3	2	4	8
4	3 .	9	
5	4	16	64
6		25	
7	6	36	216
8	7	49	343
9	8		512
10	9	81	729
11	10	100	1000
12	Total		3025

2	What is the content of cell C11?	1000
3	What is the content of cell A1?	Number
4	What number is missing from cell A6?	5
5	What number is missing from cell C6?	125
6	What number is missing from cell C4?	27
7	What number is missing from cell B9?	64

1 What is the content of cell B5?

8	The value of cell B7 was found by using the formula A7*A7.	
	What formula was used to calculate the value of cell B10?	A10*A10
9	The value of cell C7 can be found by using the formula A7*A7*A7.	•
	What formula can be used to calculate the cube of 9?	A10,*A10*A10
10	What would be the result of using the formula A10*B10?	

8	A square with an area of 25cm <sup>2</sup> is enlarged by the scale factor 2.	•		calculate the cube of 9?	A10*A1	0*A10
	What is the area of the new square?	100cm <sup>2</sup>	10	What would be the result of using		
9	A cardboard square has its outline marked on a sheet of			the formula A10*B10?		729
	paper. What is the smallest angle of rotation of the		11	The value of cell C12 was found by using the formula SUM(C2:C11).		
	square about its centre O that will bring it back onto its outline again?	90°		What would be the result of using the formula SUM(B2:B11)?		385
10	Approximate 20ft to the nearest yard.	7yd	12	What number is missing from cell B12?	'	385

(A)		Answer
: 1	1000 – 587 + 113 =	<del>37</del> 0 300526
2	24 ÷ (15 – 3) =	
3	Write in digits 10 <sup>6</sup> .	1000000
4	Write in order of size, starting with the smallest: 2:3, 2.3, 23%, $\frac{3}{2}$ .	23% 2:3 <sup>3</sup> / <sub>2</sub> 2.3
5	Divide 65 in the ratio 2:3.	26: 39
.6	$0.6 \times 0.3 =$	0.18
7	$\frac{10}{12} \div 5 =$	. 1
8	Approximate 0.3572 to a 2 decimal places	<b>a</b> .0.36.
	b the nearest hundredth.	<b>b</b> 0.36
9	Estimate $\frac{5964}{14.5 \times 4.1}$ to the neare	est 100 100
10	If $x = 3$ , $b = 4$ , evaluate $2x + \frac{1}{2}$	y². 22
11	4a - 20 = 2a	so a =10
12	6 <sup>3</sup> =	216
A 2.30		

Mental Arithmetic 6 Answers

12	$6^3 =$	216	
В		Answer	
1	What is the change from £1 if I buy three tulips at 18p each?	46p	
2	How many Euros for £50 at 1.2 Euros to £1?	€60	
3	3ft 6in =	42in	
4	15yd – 12ft =	33ft = 11yd	
5	How many days inclusive from 14 March to 3 May?	51d	
6	0.01 of 3.5l = ml	35ml	
7	A wooden block measures 3cm × 4cm × 5cm. Find its total surface area.	. 94cm²	
8	A right-angled triangle with sides of 3cm, 4cm and 5cm is enlarged by the scale factor 3. What is the length of the longest side of the new triangle?	15cm	
9	A cardboard square has its outline marked on a sheet o paper. How many times can the square be rotated 90° about its centre to bring it back onto its outline again?	f 4	
10	Approximate 2444kg to the nearest tonne.	2t	

Path			Drive
	4	House	
garden		Path	
Vegetable ම්		Vegetable garden	Garage

		Scale 1 : 200
1	What length in metres is represented by 1cm on the plan?	2m
2	What size is the drive?	4m by 14m
3	What is the area of the drive?	56m²
4	Which has the bigger area, the drive or the vegetable garden, and by how much?	drive <b>by</b> 1m²
5	What length of fencing is needed to go all round the plot, not including the gate?	66m
6	What is the total area of the plot?	300m²
7	What is the area of the garage?	24m²
8	What percentage of the plot is occupied by the garage?	8%
9	What is the area of the house?	58.5m²
10	What percentage of the plot is occupied by the house?	19,5%
11	What is the area of the lawn?	81.5m²
12	How many stone slabs 500mm square will be needed to pave	XI.XI

the path?