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1)a. Given 17.3 – 4.9

$$\begin{array}{r} 1\,{}^{6}7.{}^{1}3 \\ -\ 4.\,9 \\ \hline 12.\,4 \end{array}$$

b. Given £1.45 x 8

$$\begin{array}{r} £1.45 \\ \times\quad 8 \\ \hline £11.60 \\ \hline 34 \end{array}$$

c. $\frac{1}{6}$ *of* 258

$$6\overline{)2^{2}5^{1}8}\quad 43$$

2. Given $33\frac{1}{3}\%$ of £480

Step 1 : Convert $33\frac{1}{3}\%$ to a fraction $\frac{33\frac{1}{3}}{100} = \frac{1}{3}$

Step 2 : Write £'s to 2 decimal places

$\frac{1}{3}$ of £480.00

$$3\overline{)4^{1}80.00}\quad 160.00$$

= £160.00

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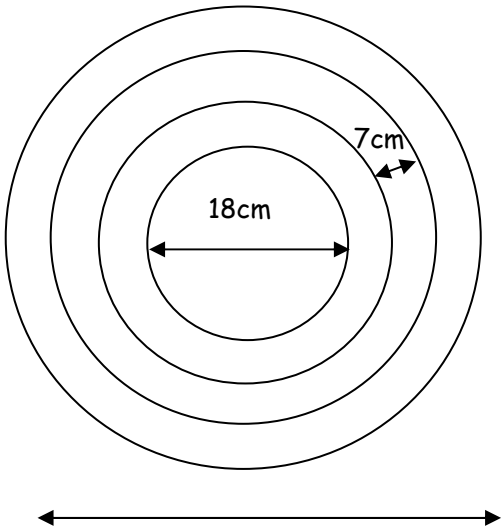
3. Given car cost £4950 and Steve made a profit of £849. He sold for:

$$\begin{array}{r} 4950 \\ +\ 849 \\ \hline 5799 \\ \hline 1 \end{array}$$

Car sold for £5799

4. Given each ring is 7cm and diameter of the circle is 18cm. Then width is:

7+7+7+18+7+7+7 = 60 cm



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5.a Given the prices for adult and child tickets the total cost for 2 adults and 2 children will be:

2 x £5 + 2 x £3 = £10 + £6 = £16

5. b Use the Family Pass for 5 trips the total cost will be:

Family Ticket = £20
5 × 2 Adult tickets = £50

Total cost = £70

Using part (a) above normal cost for 5 trips would be:

5× £16 = £80

Therefore there is a £10 saving using the family ticket.

6.a Given the alarm clock goes off at 1620 hrs. to put into 12-hour clock we subtract 12 hrs. We get 4.20 pm.

b. The difference in time between 0835 hrs and 1620 hrs is:

0835 → 0900 (25 mins)
0900 → 1600 (7 hrs)
1600 → 1620 (20 mins)

Total time is 25mins + 7hrs + 20mins = 7hrs 45mins

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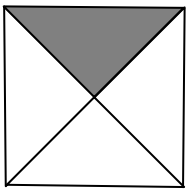
7.a Given the square tile with length 8 cm. The area of the tile is:



Area of square tile is $A = l \times b$

$A = 8 \times 8 = 64 \text{ cm}^2$

b. The shaded area is given by:

$\frac{1}{4}$ of the area of the square

Area of square is $A = l \times b$

$A = 8 \times 8 = 64 \text{ cm}^2$

$\frac{1}{4}$ of $64 = 4\overline{)64}^{16}$ 16 cm^2

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8.a Given the table, parking for 10 days in car park B will cost:

Any period up to a week (7days) = £35
+ £4 × 3days (10days - 7days) = £12

Total £47

(b) Parking in car park A for 6 days will cost:

£6 × 6days = £36

Parking in car park B for 6 days will cost:

Any period up to a week (7days) = £35

Farrah should choose car park B because it is £1 cheaper.

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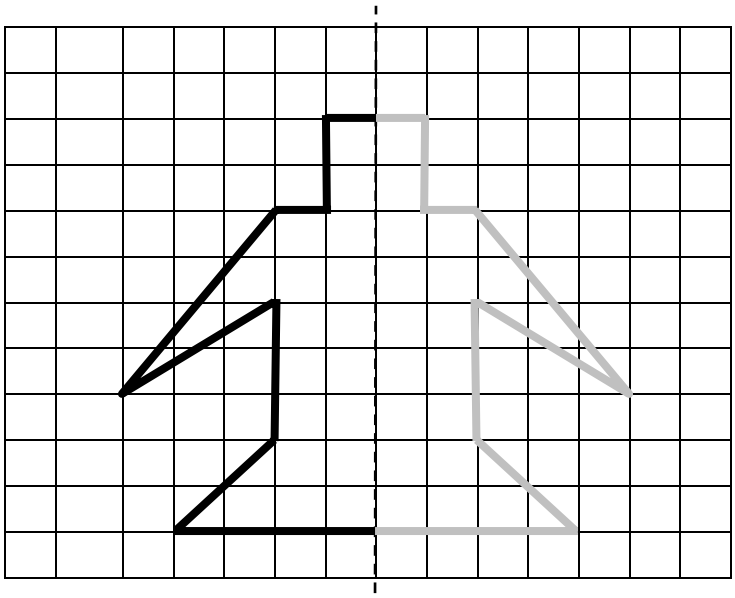
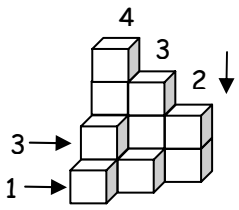
1. Completing the diagram we have:



2. Given Gurprit earns £11 258 per year. His weekly paid will be, using a calculator:

£11 258 ÷ 52 = £216.50

3. Counting the cubes we have:



4 + 3 + 2 + 3 + 1 = 13

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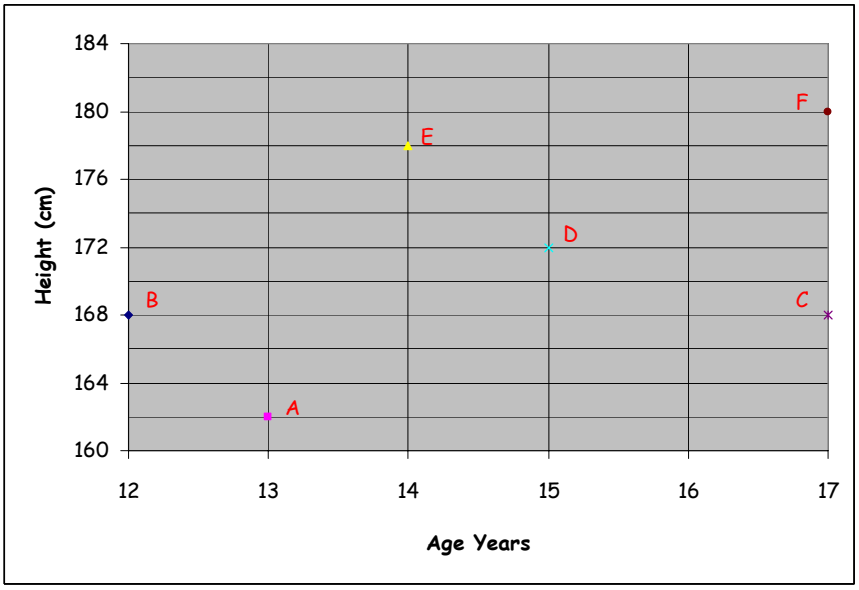
4. Given graph.



(a) If Karen is dot A then her age and height are 13 years and 162 cm.

(b) From clues,
Since Maria is the same height as Shona.
Then they must either B,C or C,B.

Tom and Maria are twins therefore we have:
Maria must be the letter C, Shona must be the letter B and Tom must be the letter F.

Peter is taller than Robert hence Peter is the letter E and Robert is D.

NAME	Karen	Maria	Tom	Shona	Peter	Robert
DOT	A	C	F	B	E	D

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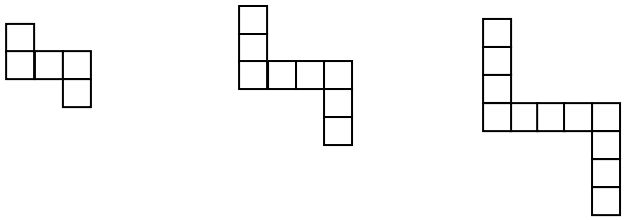
5. Given the patterns, we are adding on 3 squares each time.



(a) Completing the table we get:

Pattern Number	1	2	3	4	5	6		11
Number of squares	5	8	11	14	17	20		35

(b) Steps for working out the rule:

3 x 3 + 2 = 11

1. Difference is 3
2. Part of rule is 3p
3. Correction factor, so that the rule works is, add on 2

Full rule is: S = 3p + 2

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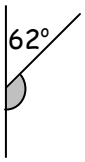
6. Given the flagpole picture.



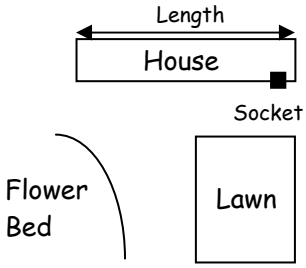
The size of the shaded angle is

$180^\circ - 62^\circ = 118^\circ$

7. Given Irene has £20 to spend and can only buy 3 items of which a maximum of 2 can be the same. Another possible 5 ways that Irene can get the free bag are: (there are more!)

Item 1	Item 2	Item 3	Total
Soap	Soap	Shampoo	£16
Soap	Soap	Shower Gel	£17
Soap	Soap	Deodorant	£19
Soap	Shampoo	Shampoo	£17
Soap	Shower Gel	Shower Gel	£19
Soap	Shampoo	Shower Gel	£18

8. Given plan of house and garden.



(a) From the plan the length of the house is 9.4 cm

(b) Given 1cm = 2 metres

Then the actual length of the house is

$$\begin{array}{r} 9.4 \\ \times\ 2 \\ \hline 18.8 \end{array}$$

18.8 metres

8. (c) from the plan the furthest point from the socket would be the bottom left hand corner of the lawn.

(d) Given the cable is 25m, it will not reach all parts of the lawn. Measuring the length to the corner of the lawn, it is 13.7cm which is actually 27.4m. The cable is only 25m.

9. Completing the frequency table for the temperatures we get:

Temperature °C	Tally	Frequency
12	1	1
13		0
14	1,1	2
15	1,1,1	3
16	1,1,1,1,1	5
17	1,1,1	3

The mode is the most recurring temperature with is 16 °C.

10. Given the rule

Child's Dose=(Adult's dose × Child's age) ÷ (Child's age + 12)

Given the adult dose is 15ml. A child of age 8 years will have a dose of:

$$\text{Child's Dose} = (15 \times 8) \div (8 + 12)$$
$$= 120 \div 20$$
$$= 6\text{ml}$$

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11. Given that we have 2m length of red ribbon and 3m of yellow ribbon to decorate the 5 presents. We can cut the ribbons as follows:

Box	Colour of Ribbon	Length
A	Yellow	140 cm
B	Red	75 cm
C	Yellow	70 cm
D	Yellow	90 cm
E	Red	120 cm

12. Given that 12 minutes of parking costs 20p.

(a) Then for 60p we will get $3 \times 12 = 36$ minutes of parking.

(b) To park for the maximum time of 2 hours it will cost:

2 hours is equal to 120 minutes

$12\overline{)120}$ $\quad 10$ There are 10 sets of 12 mintutes in 2 hours.

The cost of 12 minutes is 20p

Hence total cost for 2 hours is $10 \times 20 = £2$

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13. Given the recipe for one sponge.

375 g of flour
150 g of butter
100g of sugar
2 large eggs
Vanilla essences

(a) Given 3kg of flour and we use it all. We can make:

3kg is equal to 3000g

Using the calculator we have

$$375\overline{)3000} = 8$$

8 cakes can be made.

(b) Given a packet of butter weighs 250g. If we make 7 cakes we need:

For 7 cakes we need

$$\begin{array}{r} 150 \\ \times\ 7 \\ \hline 1050 \end{array}$$

1050g of butter

So we need

$$250\overline{)1050.0} = 4.2$$

5 packets of butter