1) Jesse bought 4 shirts. The individual costs of the shirts were: $£ 9.90, £ 8.25, £ 12.60$ and $£ 8.85$. What was the mean cost?
2) The temperature in Glasgow at 1.00 pm was $3^{\circ} \mathrm{C}$. By 7.00 pm it had fallen by $8^{\circ} \mathrm{C}$. In Dundee, the temperature was $-2^{\circ} \mathrm{C}$ at 1.00 pm and it had fallen by $5^{\circ} \mathrm{C}$ by 7.00 pm . Which place was the coldest at 7.00 pm , and by how much?
3) I think of a number, multiply it by 4 and add 5 . The result is 41 . What was my original number? (Let the original number be $x$ )
4) Would you prefer $5^{3}$ pounds or $2^{7}$ pounds?

5) Isabel paid for 3 cups of hot chocolate, each costing $£ 1.85$, with a $£ 20$ note. How much change should she receive?
6) Is 647 in the sequence $5,8,11,14, \ldots$ ?
7) I have two digits.

One of my factors is 3 .
I am not a multiple of 8 .
I am an even number.
I am a square number.

What number am I?
2) A bicycle wheel moves through a distance of approximately $3 \frac{1}{7}$ times its diameter in one revolution. If its diameter is 56 cm , what is this distance? Josie counts her front wheel doing 500 revolutions. How far has she cycled at that time?
3) I think of a number, multiply it by 3 and add 4. The result is 16 less than 5 times the original number. What was the original number? (Let the original number be $x$ )

1) Express 324 as a product of its prime factors, and hence show that it is a square number and find its square root.
2) Find the area of this rectangle:

$$
2 x+3
$$


3) Miss Bowen, Mr Hall and Mrs Jacobs own shares in a business. Miss Bowen owns $\frac{2}{5}$ of it. Mr Hall owns $\frac{2}{7}$ of it. Mrs Jacobs owns the rest. What fraction of the business does she own?

1) Maya has 60 Freddos. She leaves one quarter of them at home. She shares the rest of them at school with Pooja and Miyuki
in the ratio 2:3:4 respectively.
How many do they each have?
2) The first five terms of a sequence are 3, 7, 11, 15 and 19.

Which term of the sequence is 359 ?
3) Will spends $35 \%$ of his pocket money on a scarf.

Lucy spends $\frac{2}{5}$ of her pocket money on some gloves.
Who spends a greater proportion of their pocket money?
Does that person definitely spend more money? Show why your answer is correct.

1) Tamsin and Abi make $£ 34.71$ from a cake sale. They split the money between two charities in the ratio $2: 1$
How much does each charity get?
2) The area of this rectangle is $12 x+18$

What is its length?
? cm

3) Rhamel is getting some snacks for a party.
$\frac{2}{3}$ of his guests are vegetarian. Of those, $\frac{1}{4}$ are vegan.
What fraction of all his guests are vegan?

1) The mean of five number is 6.

The range is 8
The mode is 2
The median is 7
What are the five numbers?
2) Freya wants to find two 2-digit numbers whose product is 234 Use prime factorisation to help her.
3) The perimeter of this square is 28 cm

Find the value of $x$


1) Which is bigger $16 \%$ of $£ 40$ or $40 \%$ of $£ 16$ ?
2) Morgan says that if she doubles her age and subtracts 5 she gets Tasha's age. How would Tasha say that she can get Morgan's age?
3) The formula to work out the cost of a taxi ride is $C=3 d+5$ where $C$ is the cost in pounds and $d$ is the distance in miles. What is the call out charge and how much would a journey of 6 miles cost?
Draw a graph showing the costs for different distances

4) Ebony got eleven marks out of fifteen in a test. $70 \%$ was required to get an achievement point. Was she successful?
5) Will and Lennon set out to walk $8 \frac{1}{2}$ miles. How much further did they have to walk after they had walked $5 \frac{2}{3}$ miles?
6) This shape is a square with two sides marked with an expression for the length. Find the value of $x$ and the area of the square.

7) Show that the $20^{\text {th }}$ term in each of the following two sequences is the same:
$8,14,20,26, \ldots$ and $46,50,54,58, \ldots$
8) Holly wants to find $16 \%$ of $£ 25$. She says it's the same as $25 \%$ of $£ 16$. Is she correct?
9) A square is attached to a rectangle as shown in the diagram. Round every length to 1 decimal place to work out an approximation for the total area of the shape (without using a calculator).

10) What is the length of this rectangle if the area is $5928 \mathrm{~cm}^{2}$ ?

$\mathcal{N}$ ot to scale
11) The $10^{\text {th }}$ term of this sequence $3,7,11,15, \ldots$ is the same as which term of this different sequence $7,9,11,13, \ldots$ ?
12) Which of these two dogs eats more tins of food a day?

Nero eats 10 cans each week and Zeno eats 3 cans in two days.
Roughly, how many will each eat in a year?

1) Write the area of this rectangle as an expression of $x$ ?

2) Steve sets out on a $3 \frac{1}{2}$ mile walk.

After $2 \frac{1}{3}$ mile, he gets a blister. How much further does he have to walk to get to the end?
3) The perimeter of both these regular shapes are the same.

What is the value of $x$ ?


