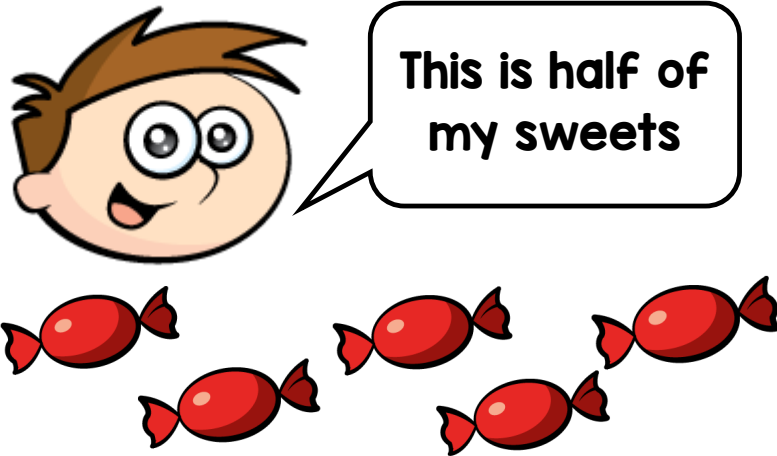


1 Fill in the missing numbers.

10 less than 46 is **36**

5 more than 30 is 35

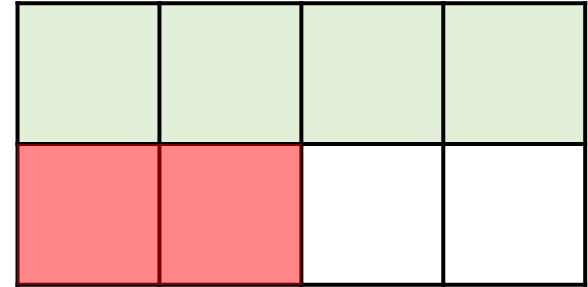
2



How many sweets does Teddy have?

Teddy has 10 sweets.

3 Lucy shades in part of a rectangle.



She shades some more squares.

$\frac{3}{4}$ of the rectangle is now shaded.

How many more squares did Lucy shade?

Lucy shaded two more squares.

- 1 Ron has these digit cards.



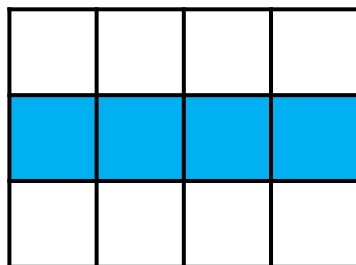
He uses two of the cards to make a 2-digit number.

How many even 2-digit numbers can he make? **He can make 4 even 2-digit numbers: 14, 16, 46, 64**

- 2 One third of the shape is shaded.

True or false?

True



- 3 Tick all the calculations that have an answer greater than 40

$$43 + 39 \quad \checkmark$$

$$35 - 6$$

$$23 + 28 \quad \checkmark$$

$$10 \times 7 \quad \checkmark$$

$$24 \div 2$$

Did you tick any without working them out?

e.g. I knew $43 + 24$ because 43 is greater than 40

- 1** Which of these numbers is closest to 10?

3

13

Which of these numbers is closest to 50?

75

28

- 2** What are the missing numbers?

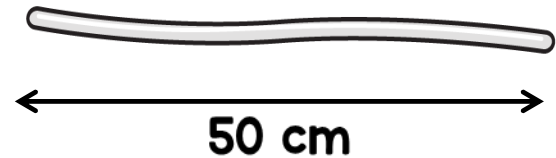
$$64 = 10 + \boxed{54}$$

$$39 = 100 - \boxed{61}$$

- 3** Annie has an 80 cm piece of wire.



She cuts the wire into two pieces.
The long piece is 50 cm long.



She cuts the smaller piece into 2 more pieces of equal size.

How long is one of these pieces?

$$\begin{aligned} 80 - 50 &= 30 \\ 30 \div 2 &= 15 \end{aligned}$$

15 cm

1 What are the missing digits?

$$\begin{array}{|c|c|} \hline 3 & 1 \\ \hline \end{array} + \begin{array}{|c|c|} \hline 4 & 5 \\ \hline \end{array} = \begin{array}{|c|c|} \hline 7 & 6 \\ \hline \end{array}$$

2 Annie and Ron each think of a number.

I'm thinking of the number 6

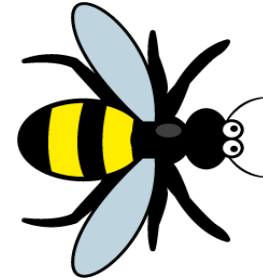


The sum of their numbers is 25

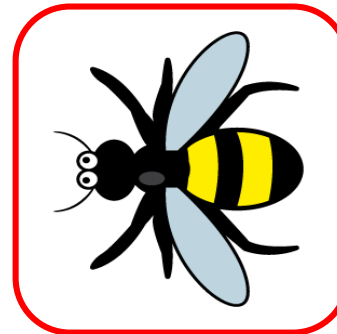
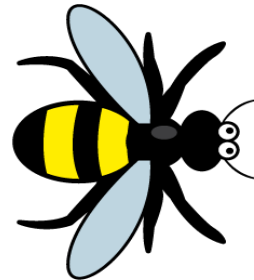
What is Ron's number? $25 - 6 = 19$

Ron's number is 19

3 The bee makes a half turn.



Which way is the bee now facing?



- 1 There are 5 marbles in a bag.



$$\begin{aligned} 5 \times 10 &= 50 \\ 1 \times 10 &= 10 \\ 50 + 10 &= 60 \end{aligned}$$

Ron has 10 bags of marbles.

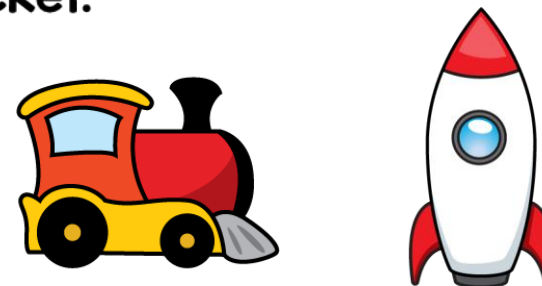
He puts 1 more marble in each bag.

How many marbles are there in total now? **60 marbles**

- 2 Work out the missing digit.

$$\boxed{5} + \boxed{7} + \boxed{4} = 16$$

- 3 A toy train costs £4 more than a rocket.



The train costs £15

How much do the train and the rocket cost in total?

$$\begin{aligned} £15 - 4 &= £11 \\ £15 + £11 &= £26 \end{aligned}$$

Total cost is £26

- 1** Here is how much it costs to go to the zoo.



$$\begin{aligned}\pounds 5 \times 3 &= \pounds 15 \\ \pounds 10 + \pounds 15 &= \pounds 25\end{aligned}$$

Mr Jones and his 3 children go to the zoo.

How much does it cost them altogether? **£25 altogether**

- 2** If

$$\triangle + \triangle = 12$$

$$\heartsuit + \triangle = 19$$

$$\begin{aligned}12 \div 2 &= 6 \\ 19 - 6 &= 13\end{aligned}$$

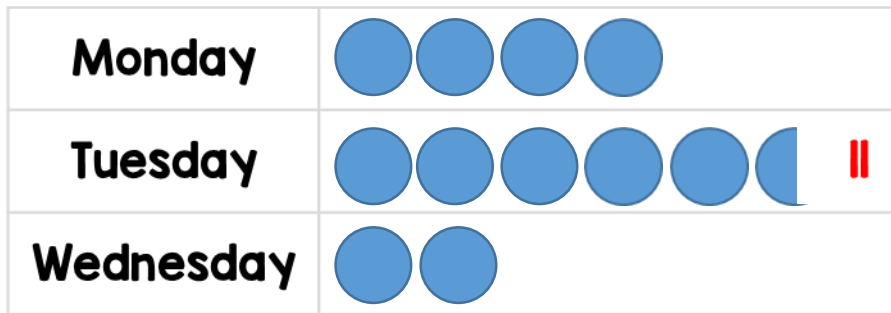
What is the value of $\heartsuit$? **13**

- 3** What are the missing numbers?

$$\boxed{4} \times 10 = 40$$

$$\boxed{70} \div 10 = 7$$

- 1 The pictogram shows the number of children who walk to school each day.



 = 2 children

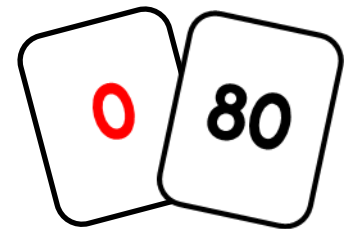
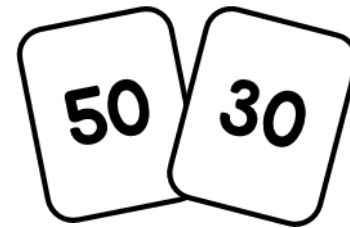
There are 20 children in the class.

How many children did not walk to school on Tuesday?

$$20 - 11 = 9$$

9 children didn't walk to school on Tuesday.

- 2 These pairs of numbers all have the same total.



Work out the missing numbers.

1 Mary makes toys

- On Monday she makes 7 toys.
- On Tuesday she makes 8 toys.

By Wednesday she has to make 20 toys in total.

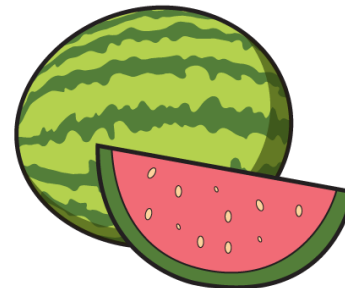
How many toys does Mary need to make on Wednesday?

$$\begin{aligned} 7 + 8 &= 15 \\ 20 - 15 &= 5 \end{aligned}$$



Mary needs to make 5 toys.

2 Tom has £20



Melon
£2 each

He buys 7 melons. $7 \times 2 = 14$
 $20 - 14 = 6$

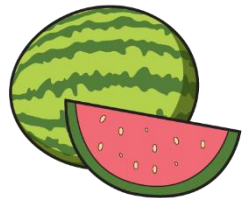
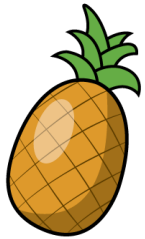
How much money does he have left?
Tom has £6 left.

3 Circle 3 numbers that sum to 12

6 5 4 3 2 1

6, 5 and 1
6, 4 and 2
5, 4 and 3

- 1 The cost of a pineapple is twice the cost of a melon.



£4 each

$$\begin{aligned}\text{£}4 \times 2 &= \text{£}8 \\ \text{£}4 + \text{£}8 &= \text{£}12\end{aligned}$$

How much do the pineapple and melon cost altogether? **They cost £12 altogether.**

- 2 Tommy thinks of a two-digit number.

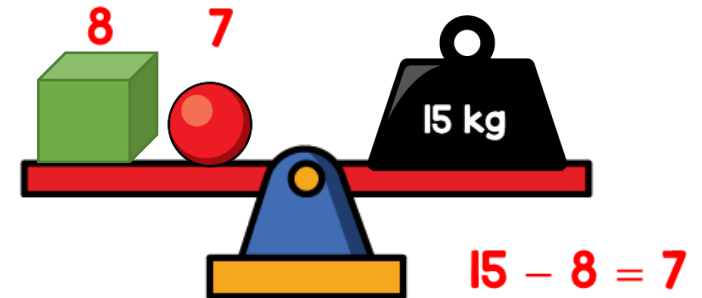
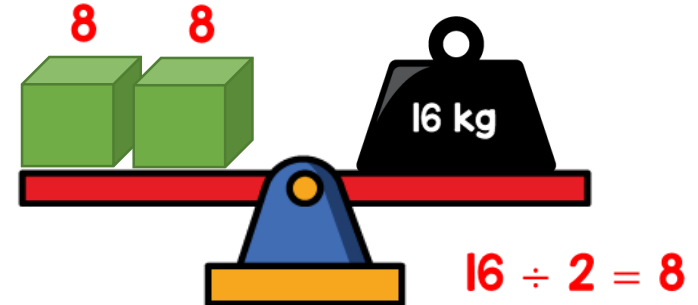
My number ends in a 5



Does Tommy's number have to be odd? Explain your answer.

Yes, all numbers ending in 5 are odd.

- 3 Gina balances some scales.



What is the mass of the sphere?

The mass of the sphere is 7 kg.

- 1 Here are some digit cards.



Mary makes a 2-digit number using two of the cards.

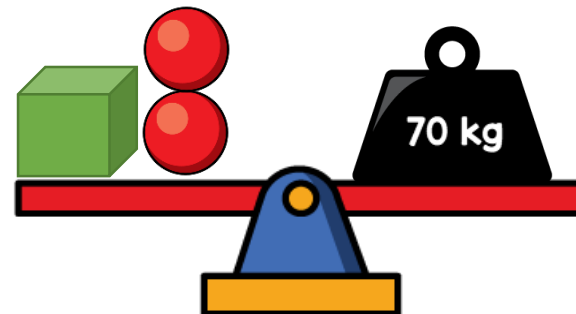
How many different numbers can she make? **6 different numbers**
14, 15, 41, 45, 51, 54

- 2 Complete the number sentences.

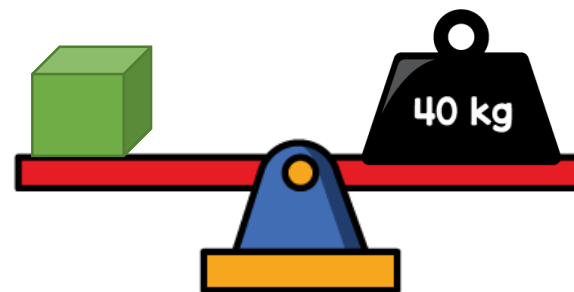
$$60 + \boxed{19} = 79$$

$$15 + 12 = 12 + \boxed{15}$$

- 3 Tom balances some scales.



$$70 - 40 = 30$$
$$30 \div 2 = 15$$



What is the mass of the sphere?

The mass of the sphere is 15 kg.

Problems of the Day 2020



- 1 Use $<$, $>$ or $=$ to make these number sentences correct.

$$5 \times 7 \quad (<) \quad 40$$

$$6 \times 2 \quad (<) \quad 7 \times 2$$

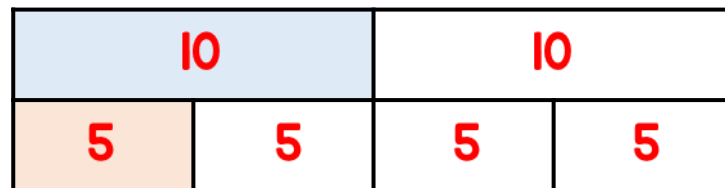
$$10 \div 2 \quad (<) \quad 12 \div 2$$

- 2 There are 50 children in a school.
15 of the children are girls.
How many more boys than girls are in the school?
- $$50 - 15 = 35$$
- $$35 - 15 = 20$$
- There are 20 more boys than girls.

- 3 Mr Patel writes a number on the board.

- Lee finds $\frac{1}{2}$ of the number.
- Kim finds $\frac{1}{4}$ of the number.
- Lee's answer is 5 more than Kim's.

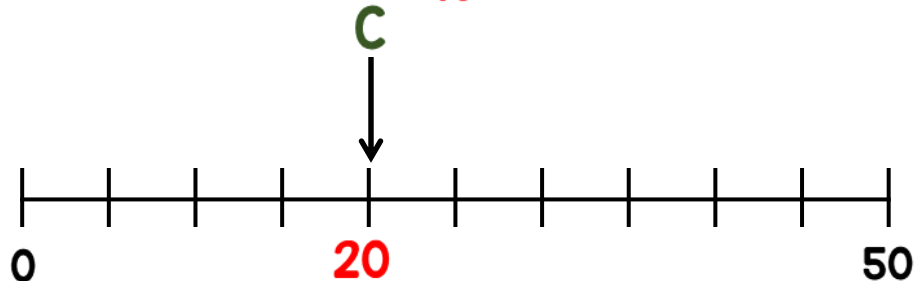
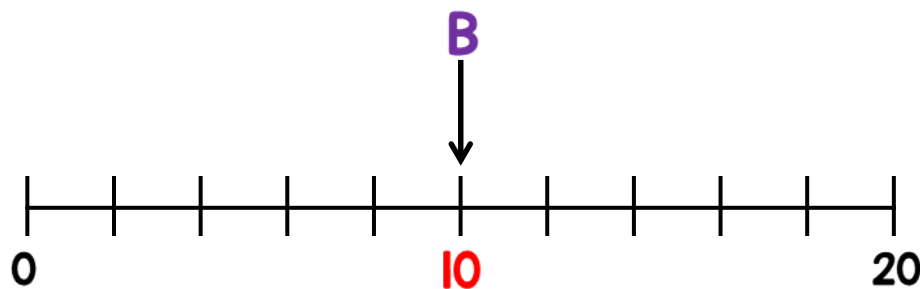
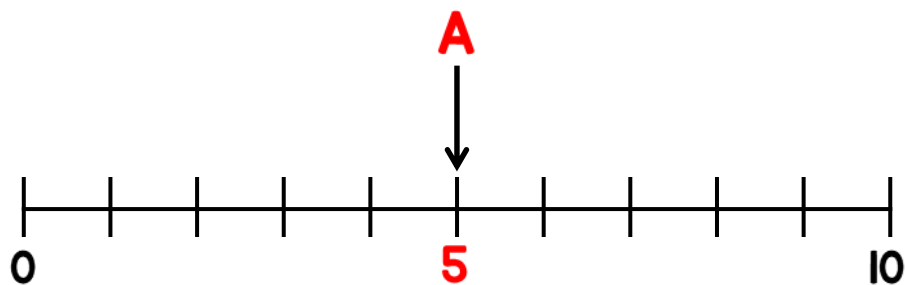
What is the number Mr Patel started with? This bar model may help you.



Mr Patel started with 20

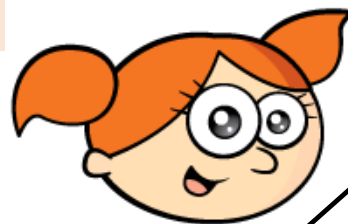


- 1 Given that $A + B = C$
Draw an arrow pointing to C



- 2 Amir has a box of 50 counters.
12 of the counters are red.
17 of the counters are blue.
The rest of the counters are yellow.
Which coloured counter are there more of?
 $12 + 17 = 29$
 $50 - 29 = 21$
There are more yellow counters.

3



When I share my stickers between me and my 4 friends, we all get 7 stickers.

- How many stickers did Lisa share out?
 $7 \times 5 = 35$
Lisa shared 35 stickers.

- 1 Sam has £50
He buys this cap and jumper with his money.



How much money does he have left?

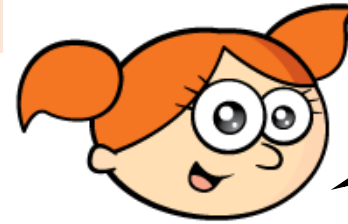
Sam has £16 left.

- 2 One half of a number is 6
What is double the number?

$$6 \times 2 = 12$$
$$12 \times 2 = 24$$

24 is double the number.

3



I have 42 stickers

I have 60 stickers



Mo gives Alex some stickers.
They now have the same number of stickers.

How many stickers does Mo give Alex?

$$60 - 42 = 18$$
$$18 \div 2 = 9$$

Mo gives Alex 9 stickers.

1 Which of these are equal to 15?

$$10 + 5$$



$$5 + 5 + 5$$

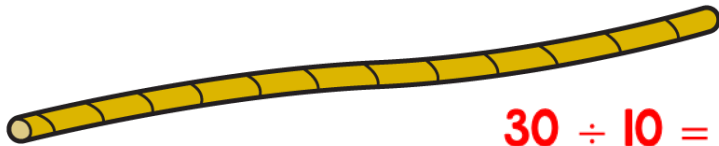


$$20 - 5$$



$$1 + 5$$

2 A rope measures 30 metres.



$$30 \div 10 = 3$$
$$3 \times 5 = 15$$

The rope is cut into 10 equal sized pieces.

What is the total length of 5 of these pieces?
15 metres

3 Danny has two boxes of sweets.



He puts the sweets into smaller bags.

There are 5 in each bag.

$$40 + 40 = 80$$
$$80 \div 5 = 16$$



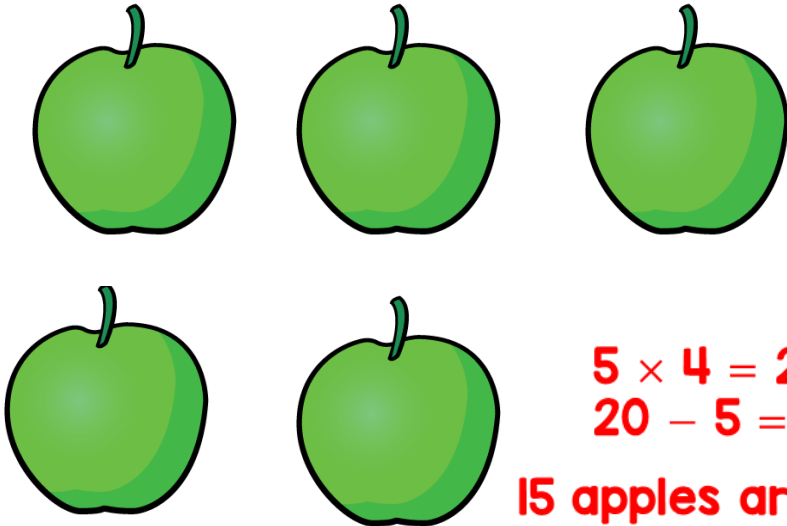
How many bags can Danny fill using all the sweets?

Danny can fill 16 bags.

1 In a box

- $\frac{1}{4}$ of the apples are green.
- The rest are red.
- There are 5 green apples.

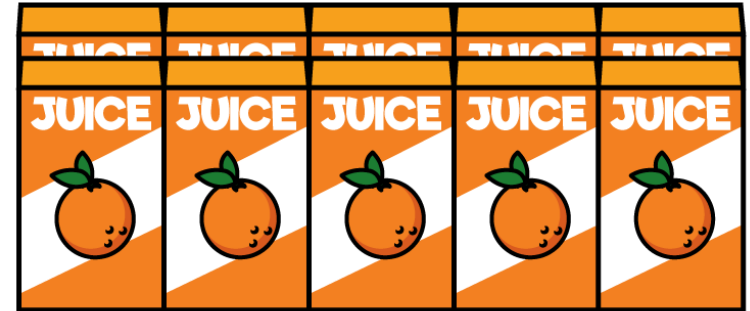
How many apples are red?



$$5 \times 4 = 20$$
$$20 - 5 = 15$$

15 apples are red.

2 Amir has 10 cartons of juice.



Each carton holds 2 litres of juice.

How much juice is in 7 cartons?

$$7 \times 2 = 14$$

7 cartons hold 14 litres of juice.

1 Here are 3 number patterns.

0	5	10	15	20	25	30
---	---	----	----	----	----	----

27	37	47	57	67	77	87
----	----	----	----	----	----	----

32	30	28	26	24	22	20
----	----	----	----	----	----	----

What is the sum of the three missing numbers?

$$25 + 47 + 24 = 96$$

2 Work out the value of each symbol.

$$\triangle q + \triangle q = 18$$

$$18 \div 2 = q$$

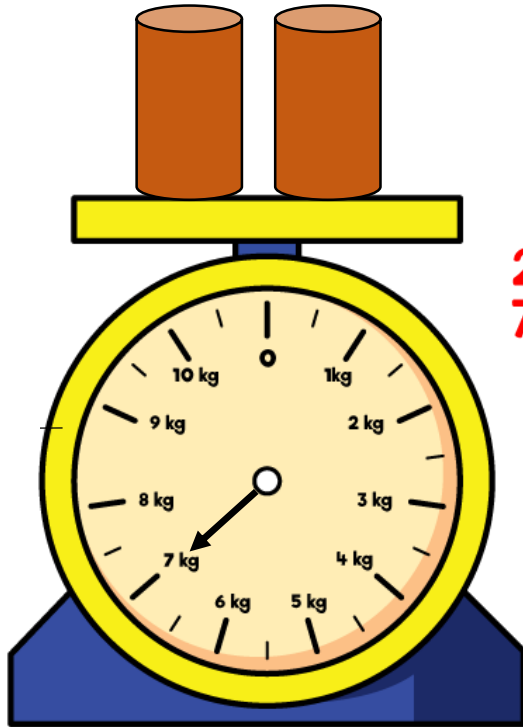
$$\triangle q + \diamond 21 = 30$$

$$30 - q = 21$$

$$\star 31 - \diamond 21 = 10$$

$$21 + 10 = 31$$

- 1 Mary measures the mass of 2 cylinders.



$$\begin{array}{l} 2 \times 5 = 10 \\ 7 \times 5 = 35 \end{array}$$

What is the mass of 10 of these cylinders? **35 kg**

- 2 Jack and Dora each have some money.



I spent half of my money.

I spent £12



They have the same amount left.

Dora spent £20

How much money did Jack have at the start? **$20 + 12 = 32$**

Jack had £32 at the start.

- 1 Tim has two packs of pop.
Each pack holds 24 cans.



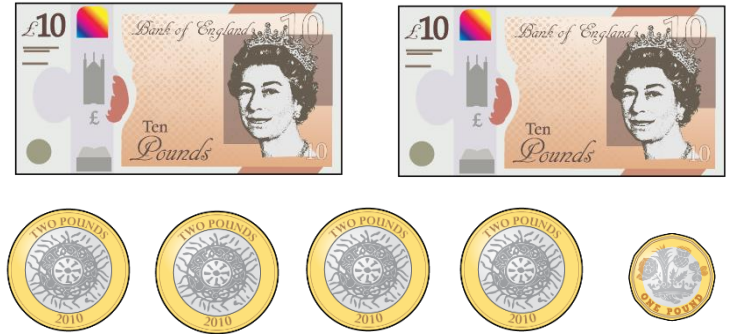
Sally has five smaller packs.
Each of her packs holds 6 cans.



$$\begin{aligned} 24 \times 2 &= 48 \\ 5 \times 6 &= 30 \\ 48 - 30 &= 18 \end{aligned}$$

How many more cans of pop does
Tim have? **Tim has 18 more
cans of pop.**

- 2 Here is some money.



The money is shared between 5
girls and 2 boys.

Each girl receives £3

How much money does each boy
receive?

$$\begin{aligned} 5 \times 3 &= 15 \\ 29 - 15 &= 14 \\ 14 \div 2 &= 7 \end{aligned}$$

Each boy receives £7

1 Mo has six 5p coins.



He also has five 10p coins.



He buys this lolly.

How much money does
he have left?

$$6 \times 5 = 30$$

$$5 \times 10 = 50$$

$$50 + 30 = 80$$

$$80 - 49 = 31$$

Mo has 31p left.



2 Mrs Green bakes muffins.
She sells them in her shop.



- On Monday she bakes 30 and sells 18 $30 - 18 = 12$
- On Tuesday she bakes twice as many muffins but has the same amount left. $30 \times 2 = 60$
 $60 - 12 = 48$

How many muffins did she sell on
Tuesday?

She sells 48 muffins on
Tuesday.

1 Complete these number sentences.

$$5 + 5 + 5 + 5 = \boxed{4} \times 5$$

$$2 + 2 + 2 + 2 + 2 = \boxed{2} \times 5$$

$$10 + 10 + 10 = \boxed{6} \times 5$$

$$5 - 5 = \boxed{0} \times 5$$

2 Lou has 5 bananas.



Dan has 8 times as many. $5 \times 8 = 40$
 $40 + 5 = 45$

How many bananas do they have in total?
They have 45 bananas in total.

3 A bag contains 100 counters.

Susie takes out 26 counters.

Mark takes out 39 counters.

How many counters are left in the bag?

$$100 - 26 = 74$$
$$74 - 39 = 35$$

There are 35 counters left in the bag.