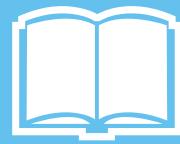


Mathletics

Series

B

Student



Operations with Number

My name _____



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Series B – Operations with Number

Contents

Topic 1 – Addition (pp. 1–24)

- | | Date completed |
|---------------------------------|-----------------------|
| • my own addition chart _____ | / / |
| • language _____ | / / |
| • counting on strategy _____ | / / |
| • using number lines _____ | / / |
| • word problems _____ | / / |
| • missing addend problems _____ | / / |
| • doubles _____ | / / |
| • make 10 _____ | / / |
| • turnarounds _____ | / / |

Topic 2 – Subtraction (pp. 25–40)

- | | |
|---|-----|
| • language _____ | / / |
| • take away _____ | / / |
| • counting back _____ | / / |
| • counting on _____ | / / |
| • find the difference _____ | / / |
| • relating addition and subtraction _____ | / / |
| • doubles _____ | / / |
| • facts to 10 _____ | / / |
| • facts to 15 _____ | / / |

Series B – Operations with Number

Contents

Topic 3 – Addition and subtraction (pp. 41–54)

- | Date completed |
|---------------------------------|
| • fact families _____ / / |
| • counting on 20–50 _____ / / |
| • counting back 20–50 _____ / / |
| • explore _____ / / |
| • mixed word problems _____ / / |

Topic 4 – Multiplication (pp. 55–63)

- | |
|--|
| • equal groups _____ / / |
| • groups and arrays _____ / / |
| • meaning of \times symbol _____ / / |
| • explore _____ / / |

Topic 5 – Division (pp. 64–69)

- | |
|----------------------------------|
| • sharing (partition) _____ / / |
| • remainders _____ / / |
| • grouping (quotition) _____ / / |

Series Author:

Rachel Flenley

Addition – my own addition chart

As you learn your addition facts, ask your teacher to quiz you on them. If you can say the answer straight away, they will put a dot in the answer square.

Colour each square as you master the fact!

+	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

Addition – language

- 1 What are some words or signs we use when we add or talk about adding?

how many altogether?

- 2 Draw the pictures for this story. Add up all the lost items. Cut it out, staple it together and read your story to a partner or your teacher.



1S Go Swimming

On Monday, 1S started their swimming lessons.

Samira lost her goggles and 1 sock.

Addition – language



On Tuesday, Ethan lost his shirt.

On Wednesday, Ella lost 1 shoe and her hat.

On Thursday, Mia lost her jumper and 1 shoe.

On Friday, Callum lost 2 socks and his shorts.

Whoops!

How many things did 1S lose altogether?

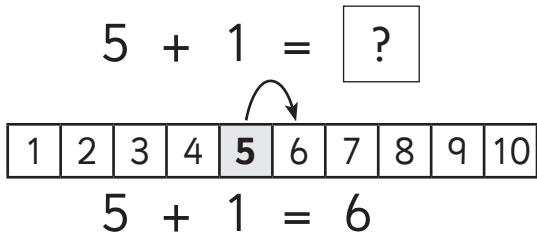
On Saturday, Ms Smith rescued everything from the lost property box.

Oh no!

Phew!

Addition – counting on strategy

Counting on is one way to solve addition number facts.



- 1 Use the number track to count on 1 more. Finish the facts.

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

a $1 + 1 =$

b $3 + 1 =$

c $4 + 1 =$

d $2 + 1 =$

e $9 + 1 =$

f $6 + 1 =$

g $7 + 1 =$

h $8 + 1 =$

- 2 Count on.

1	2	3	4	5	6	7	8	9
+1	+1	+1	+1	+1	+1	+1	+1	+1
2								

Addition – counting on strategy

Counting on is most useful when we are adding 1, 2 or 3.



$$6 + 3 = 9$$

1 Count on. Write the number fact to match.



$$5 + \boxed{1} = \boxed{\quad}$$



$$\boxed{2} + \boxed{\quad} = \boxed{\quad}$$



$$\boxed{6} + \boxed{\quad} = \boxed{\quad}$$



$$\boxed{7} + \boxed{\quad} = \boxed{\quad}$$



$$\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$$



$$\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$$



$$\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$$



$$\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$$

Addition – counting on strategy

- 1 Draw the extra carriages to match the problems. Complete the facts.



a $3 + 1 =$

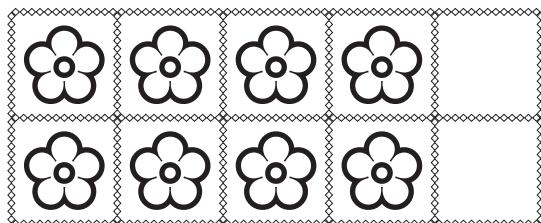
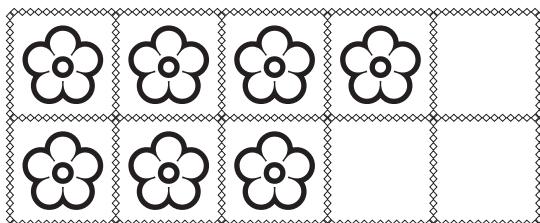
b $4 + 2 =$



c $2 + 3 =$

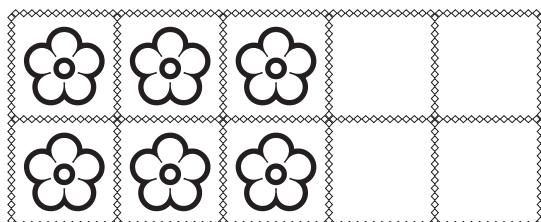
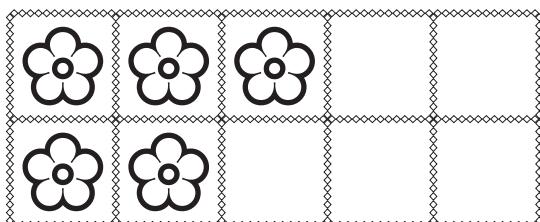
d $3 + 3 =$

- 2 Draw the extra flowers. Complete the number facts.



a $7 + 2 =$

b $8 + 2 =$



c $5 + 3 =$

d $6 + 2 =$

Addition – counting on strategy

You will need:



a partner



scissors



craft paper



a copy of this page and page 8



What to do:

Cut out the rocket parts and spread them out.

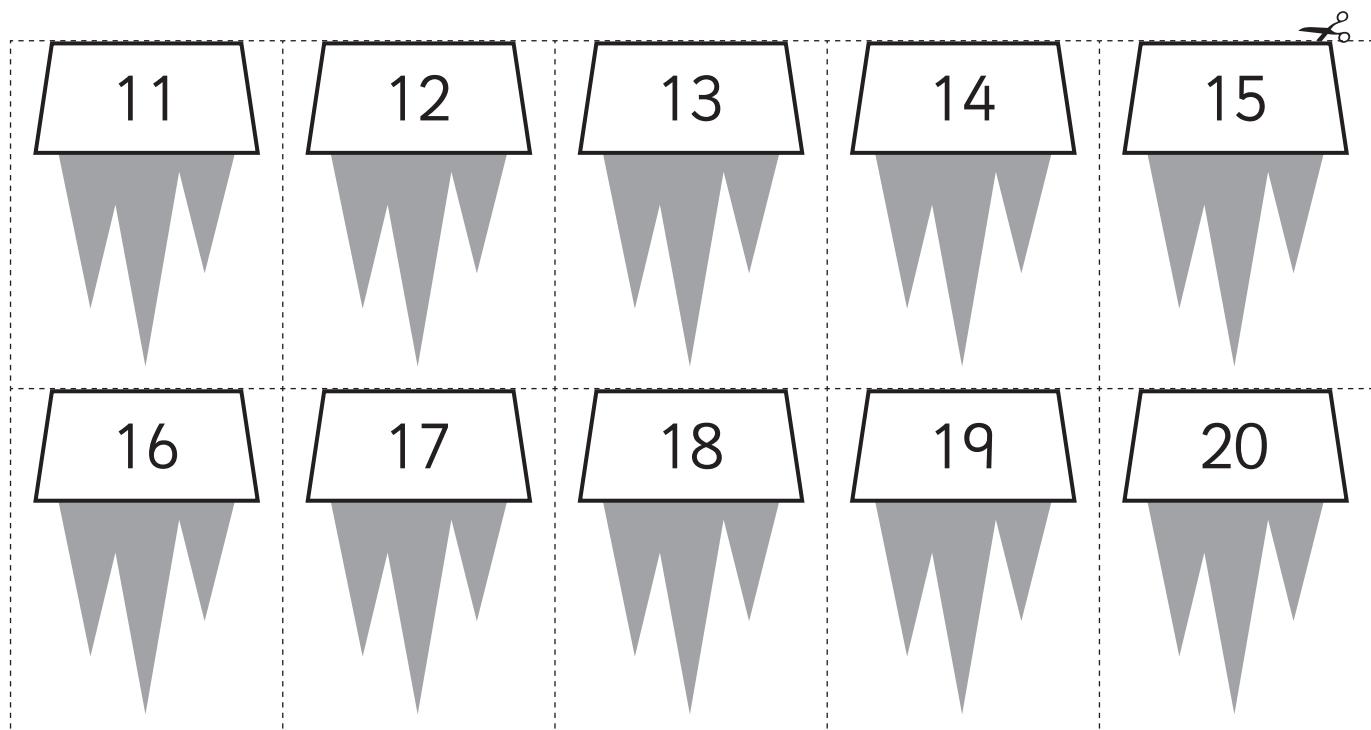
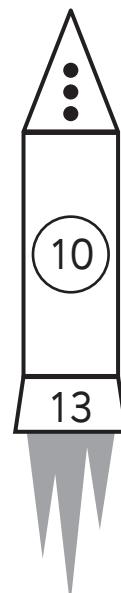
Your job is to build as many rockets as you can by matching 3 parts.

This rocket is ready for blast-off because $10 + \bullet = 13$.

Take turns building your rockets. How many can you get ready for blast-off? You will have some parts left over.

Check with your teacher if your rockets are ready to go into space.

Once your rockets have been checked, stick them on black paper. Add planets and moons. Don't forget the sun!



Addition – counting on strategy



10

9

10

12

13

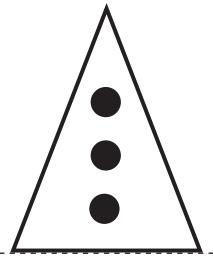
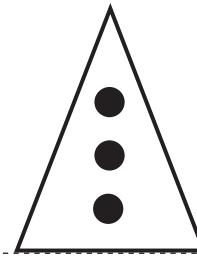
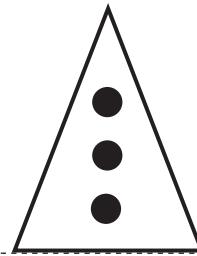
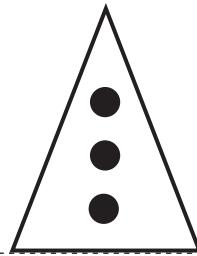
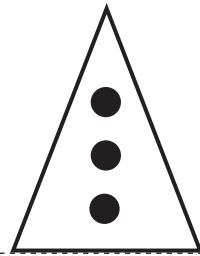
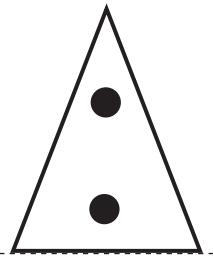
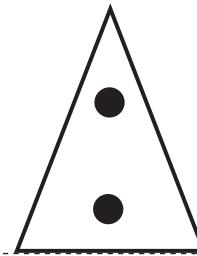
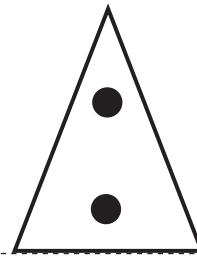
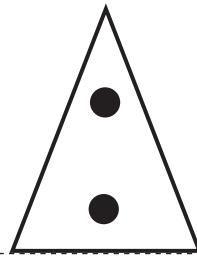
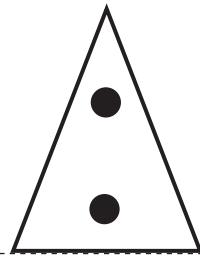
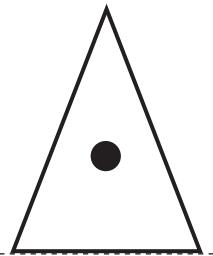
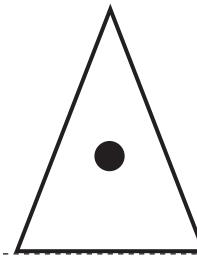
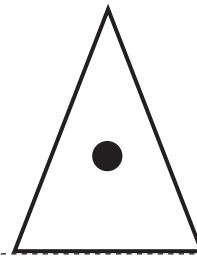
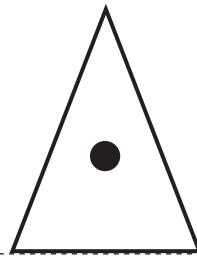
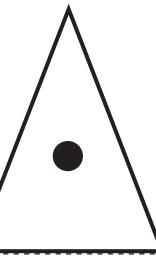
14

16

15

17

19

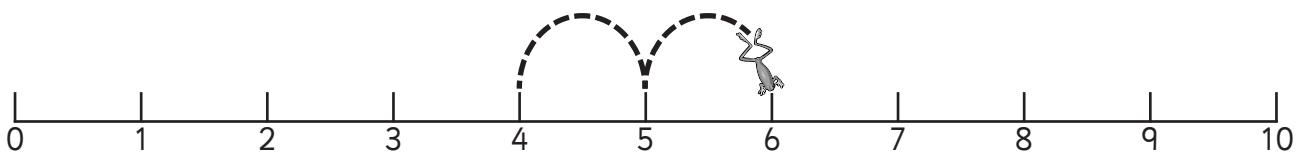


Addition – using number lines

Number lines are handy tools to use when adding.

Look at $4 + 2 = \boxed{?}$

We start at 4 and hop 2 spaces.



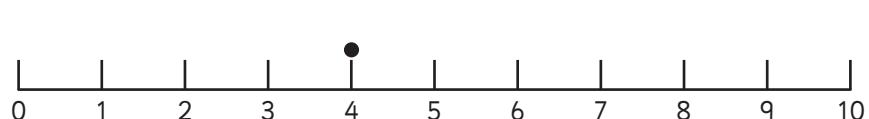
$$4 + 2 = 6$$

1 Hop along the number line and finish the number fact.

a $3 + 1 = \boxed{}$



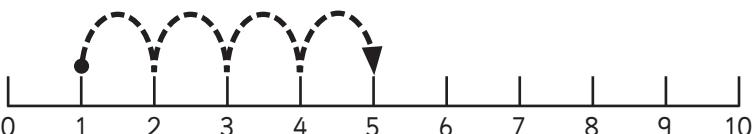
b $4 + 4 = \boxed{}$



c $2 + 3 = \boxed{}$



2 The hops are on the line. Write the number fact to match.

a  $\boxed{1} + \boxed{} = \boxed{}$

b  $\boxed{2} + \boxed{} = \boxed{}$

c  $\boxed{7} + \boxed{} = \boxed{}$

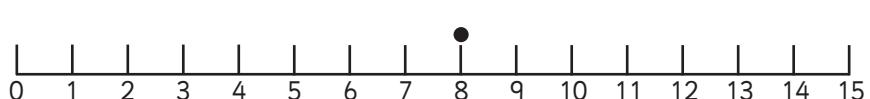
Addition – using number lines

1 Hop along the number line and finish the number fact.

a $9 + 2 =$



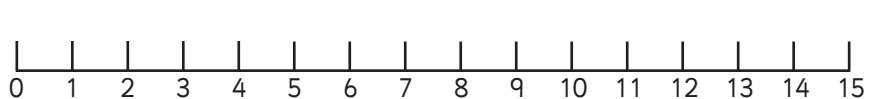
b $8 + 5 =$



c $7 + 7 =$



d $11 + 2 =$



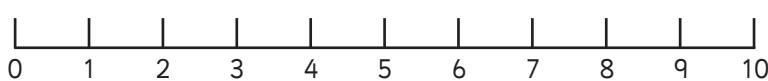
2 Show the story on the number line and as a fact.

- a Tahlia had **6** stickers. Her friend gave her **4** more. How many stickers does she have now?



$$\boxed{} + \boxed{} = \boxed{}$$

- b Mohammed kicked **3** goals on Tuesday and **6** goals on Wednesday. How many goals did he kick altogether?



$$\boxed{} + \boxed{} = \boxed{}$$

Addition – word problems

1 Draw pictures to match the stories. Write the number facts.

- a Millie Monkey has **4** bananas. Mikey Monkey has **3** bananas. How many bananas do they have altogether?

$$\boxed{} + \boxed{} = \boxed{}$$

- b Bert Bear has **5** fish. Betty Bear has **3** fish. How many fish do they have altogether?

$$\boxed{} + \boxed{} = \boxed{}$$

- c Scottie Dog has stolen **7** sausages. Cuddly Pup has stolen **8** sausages. How many sausages have they stolen altogether?

$$\boxed{} + \boxed{} = \boxed{}$$

Addition – missing addend problems

Sometimes we have to solve problems when we know the answer but we don't know all of the problem.

Noah had **4** cars.

His gran gave him some more so he now has **7** cars.

How many cars did she give him?

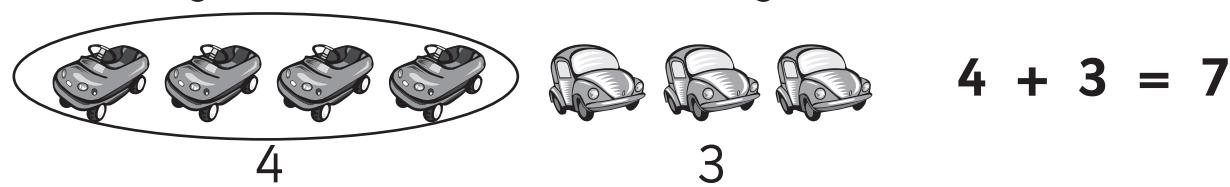
We know he had 4 cars.

We know he ends up with 7 cars.

What we don't know is how many cars his gran gave him.

One way to find out is to draw or use counters.

We draw 4 cars. Then we can draw **more** cars to get to 7 cars altogether. We count how many more cars we drew.



- 1 Zoe had **3** fish. She bought some more and now has **5** fish. How many fish did she buy?

We know she had fish.

We know she ends up with fish.

We need to find out **how many fish she bought**. Show your solution and finish the fact.

$$\begin{array}{c} 3 \\ + \quad \square \\ \hline \end{array} = \boxed{5}$$

Addition – missing addend problems

2 Lily ate **3** cakes before her party.

She ate some **more** cakes during her party.

By the end of the party, she had eaten **9** cakes altogether.

How many cakes did she eat at the party?

Show your solution and finish the fact.

$$\boxed{3} + \boxed{} = \boxed{9}$$

3 Aman had **some** toy dinosaurs.

His dad bought him **5 more**.

Now he has **11** dinosaurs.

How many dinosaurs did he have to begin with?

Show your solution and finish the fact.

$$\boxed{} + \boxed{5} = \boxed{11}$$

Addition – missing addend problems

1 Solve these problems. You can draw pictures or use counters to help.

a $2 + \boxed{} = 5$

b $3 + \boxed{} = 8$

c $\boxed{} + 8 = 10$

d $6 + \boxed{} = 11$

e $3 + \boxed{} = 10$

f $\boxed{} + 4 = 13$

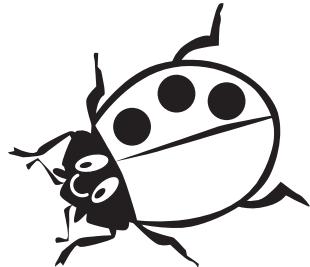
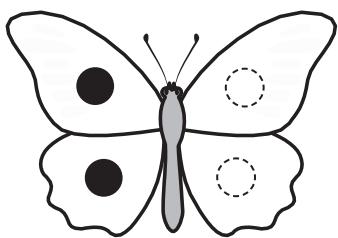
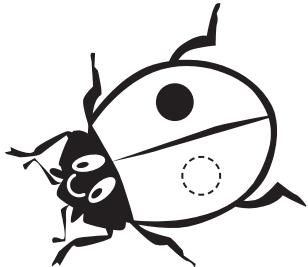
2 The answer is 14. How many different adding facts can you think of? Here is one to get you started.

$$\boxed{13} + \boxed{1} = 14$$



Addition – doubles

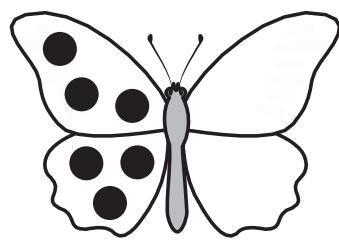
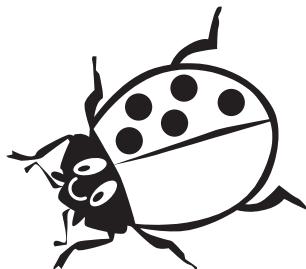
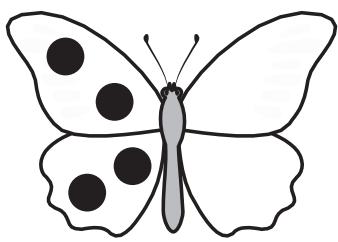
1 Draw the same number of spots on the empty side. Write the number fact to match.



a $\boxed{1} + \boxed{1} = \boxed{\quad}$

b $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

c $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

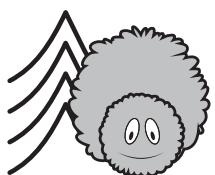


d $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

e $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

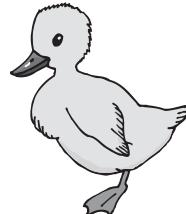
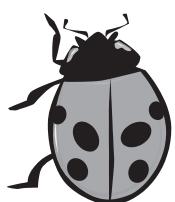
f $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

2 Draw the missing legs. Write the number fact to match.



a $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

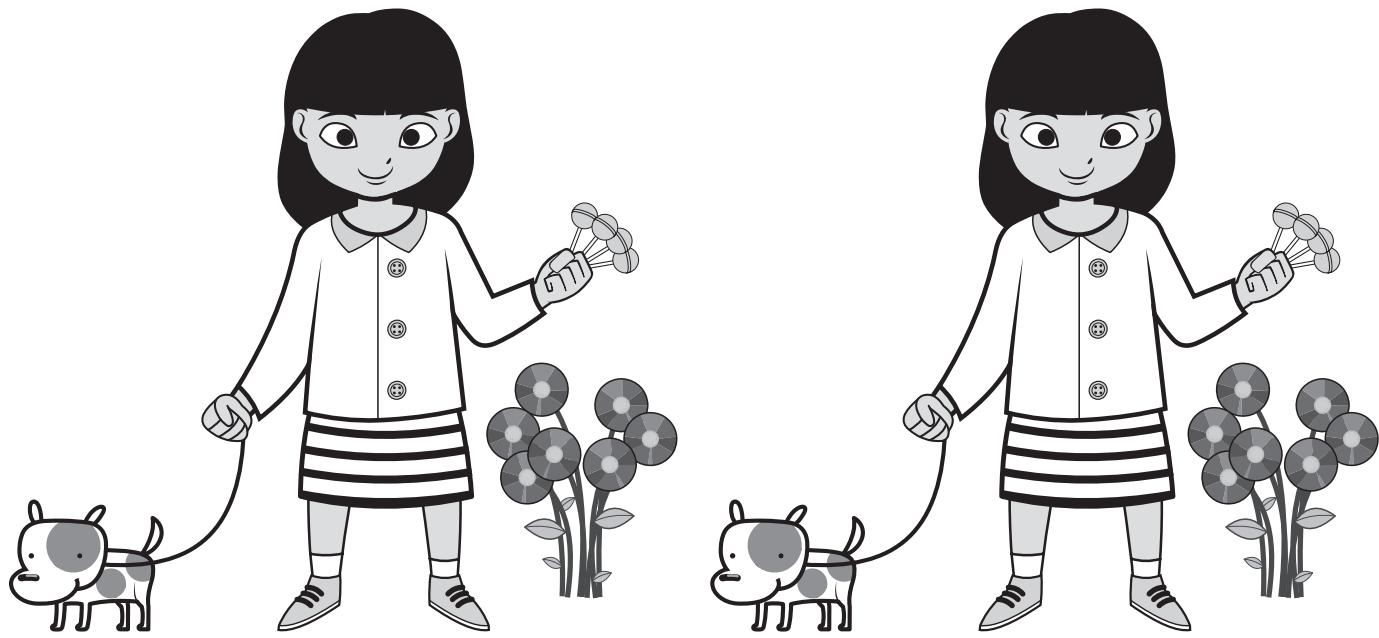
b $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$



c $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

d $\boxed{\quad} + \boxed{\quad} = \boxed{\quad}$

Addition – doubles



1 These twins show us lots of doubles facts. Here are some.

eye icon $2 + 2 = 4$

flower icon $7 + 7 = 14$

Can you find any more? Write them.

Addition – doubles

You will need:



a partner



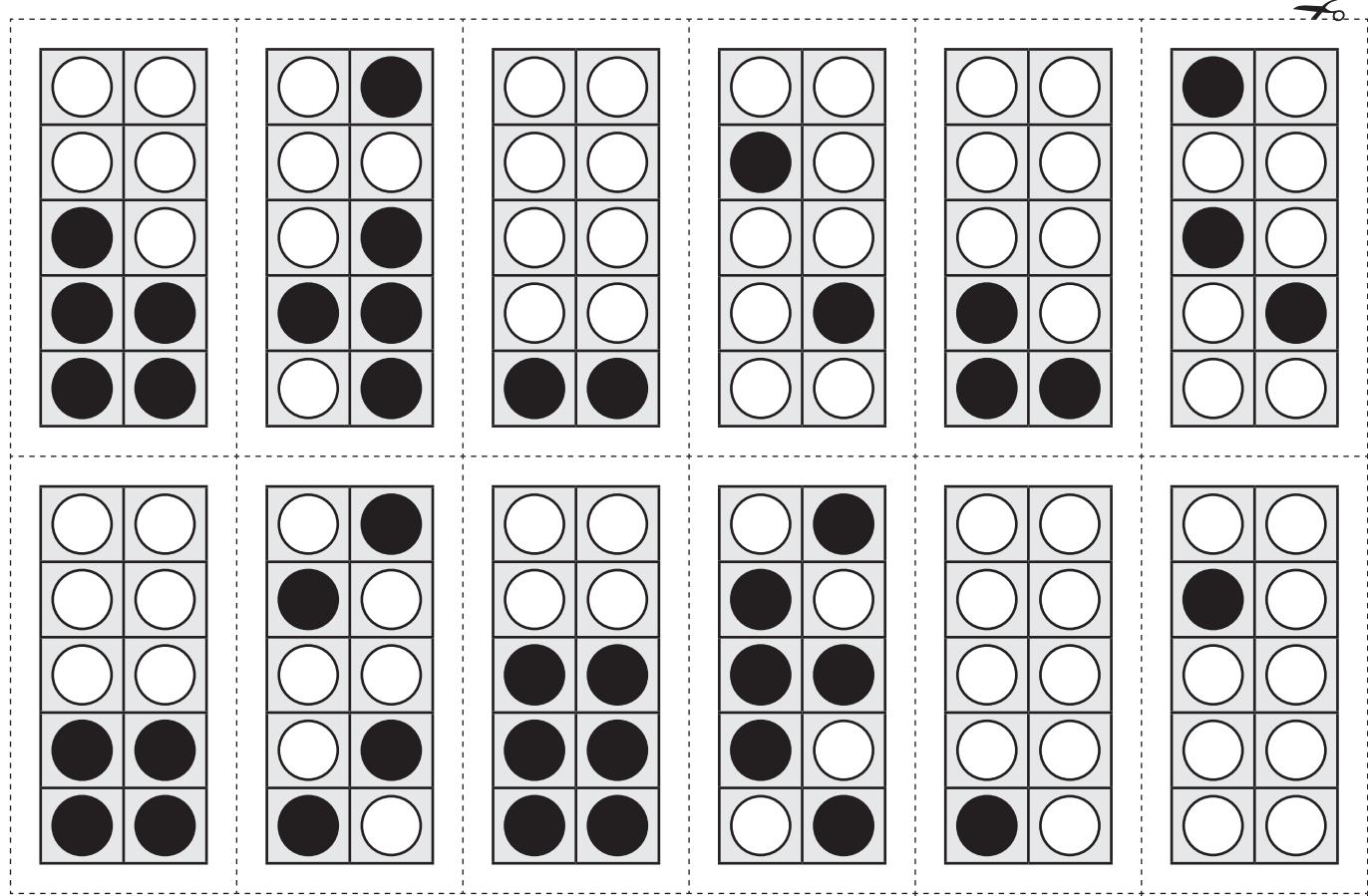
scissors



copy

What to do:

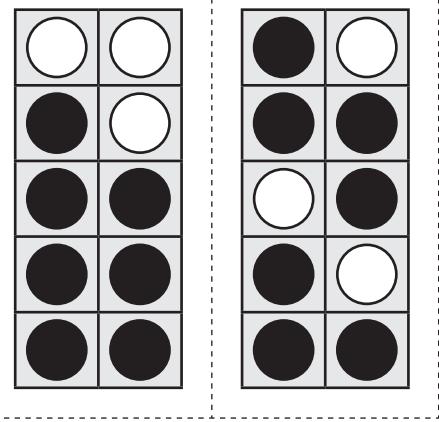
Cut out the tens frames. Shuffle them and spread them out, face down. Take turns turning 2 frames over at a time. If they are a double and you can say the matching number fact, you keep the pair. Play until all cards are gone.



What to do next:

Spread the cards out face up.

Race against each other to find doubles.
Once all the cards are taken, take turns
saying your doubles facts.



Addition – doubles

You will need:



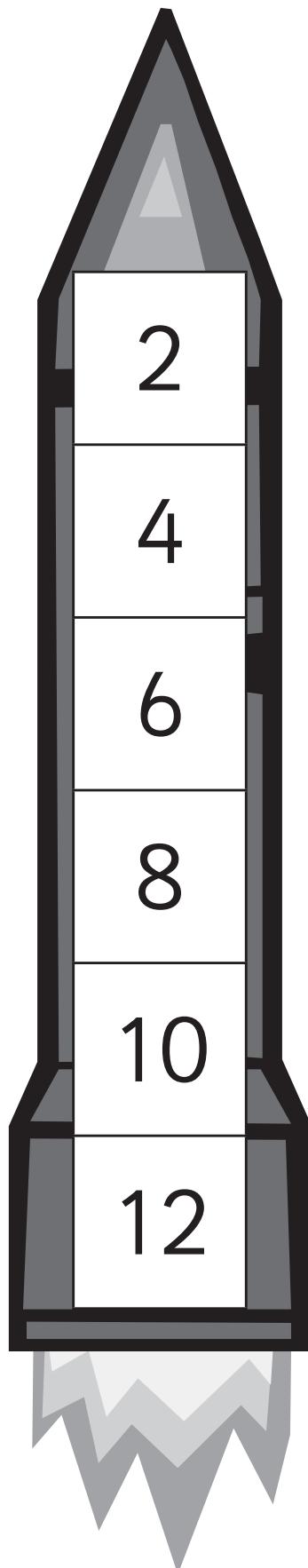
a partner



6 counters each



2 dice



What to do:

Take turns rolling 1 die. Double the number you roll and say the number fact. Place a counter on the answer. The first person to cover all their numbers blasts-off first!



*3 + 3 is 6.
I'll cover 6.*



What to do next:

Roll 2 dice and add the dots. Work out what the **double of the total will be**. You can use counters to help.

Record the number facts you make.

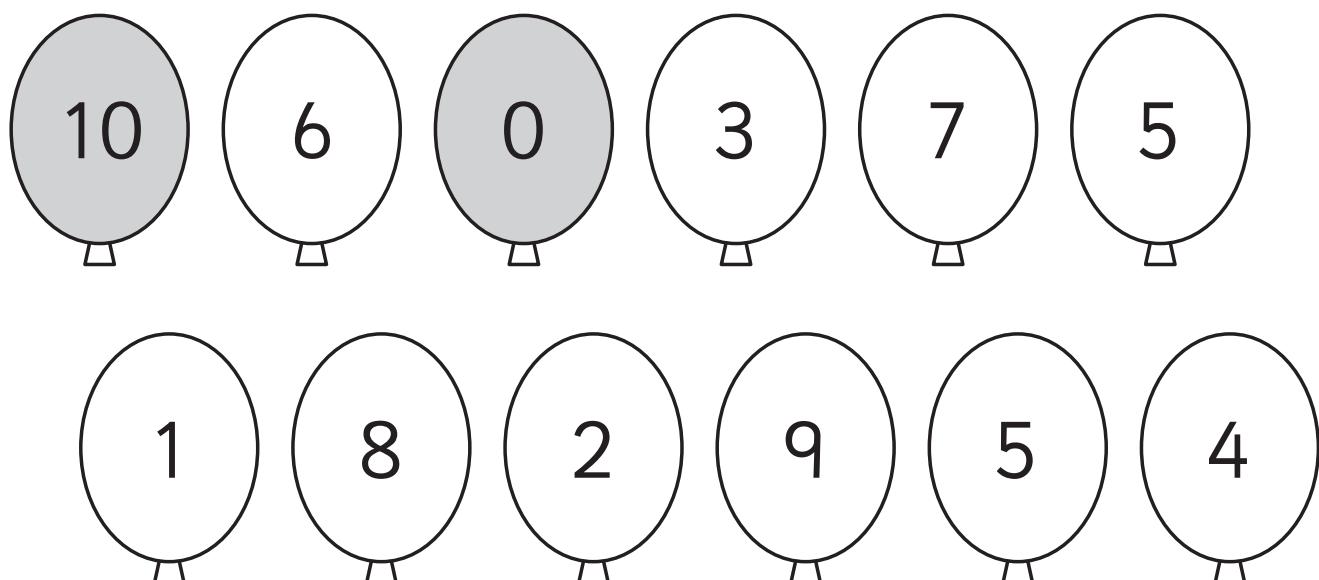
Addition – make 10

Knowing the addition facts that make 10 is really handy.
It helps us with trickier adding problems.

1 Practise your addition combinations to 10.

- a $0 + \boxed{10} = 10$ b $1 + \boxed{\quad} = 10$ c $2 + \boxed{\quad} = 10$
- d $3 + \boxed{\quad} = 10$ e $4 + \boxed{\quad} = 10$ f $5 + \boxed{\quad} = 10$
- g $6 + \boxed{\quad} = 10$ h $7 + \boxed{\quad} = 10$ i $8 + \boxed{\quad} = 10$
- j $9 + \boxed{\quad} = 10$ k $10 + \boxed{\quad} = 10$

2 You will need 6 different coloured pencils for this activity. Colour match the balloons that add to ten.

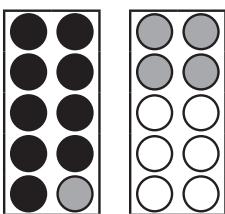


Addition – make 10

Look at $9 + 5 = ?$

We can use the **make 10** strategy to solve this.

We place 9 counters. We need to add 5 more.



We put 1 in the first tens frame.

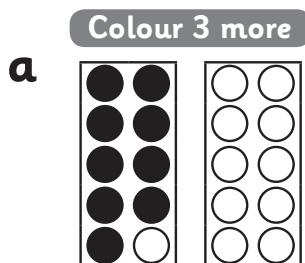
We have **made 10**.

We need to add 4 more into the other frame.

Now we have 14.

$$9 + 5 = 14$$

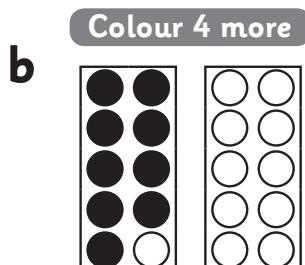
- 1 Colour more counters to solve these problems. Fill up the left tens frame first.



$$9 + 3 = \square$$

10 in one frame

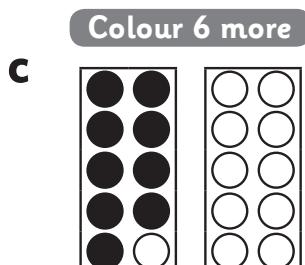
2 in the other



$$9 + 4 = \square$$

10 in one frame

4 in the other



$$9 + 6 = \square$$

10 in one frame

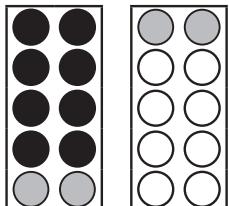
6 in the other

Addition – make 10

How do we make 10 when adding on to 8?

$$8 + 4 = ?$$

We place 8 counters. We need to add 4 more.



We put 2 in the first tens frame. We have made 10.

We need to add 2 more into the other frame.

Now we have 12.

$$8 + 4 = 12$$

2 Colour more counters to solve these problems.

a Colour 3 more

$$8 + 3 =$$

--

--

in one frame

--

in the other

b Colour 7 more

$$8 + 7 =$$

--

--

in one frame

--

in the other

c Colour 6 more

$$8 + 6 =$$

--

--

in one frame

--

in the other

d Colour 4 more

$$8 + 4 =$$

--

--

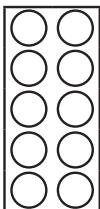
in one frame

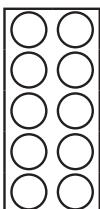
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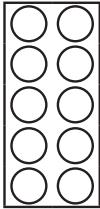
in the other

Addition – make 10

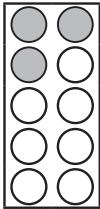
1 Colour more counters to solve these.

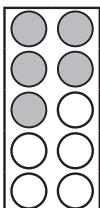
a   $8 + 5 =$ in one frame
 in the other

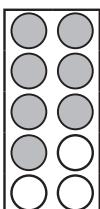
b   $7 + 6 =$ in one frame
 in the other

c   $9 + 4 =$ in one frame
 in the other

2 Write the addition facts to match the tens frames.

a   + =

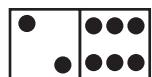
b   + =

c   + =

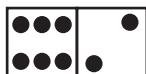
Addition – turnarounds

Turnarounds make solving addition problems easier.

$$2 + 6 = \boxed{?}$$



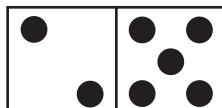
It is quicker to turn this around. We start at 6 and count on 2.



$$6 + 2 = 8 \text{ This is the same as } 2 + 6 = 8$$

1 Use turnarounds to solve these. Write the matching facts.

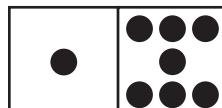
a



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

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

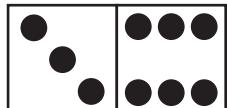
b



$$1 + 7 = \boxed{}$$

$$\boxed{7} + \boxed{1} = \boxed{}$$

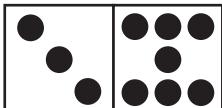
c



$$3 + 6 = \boxed{}$$

$$\boxed{6} + \boxed{3} = \boxed{}$$

d



$$3 + 7 = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

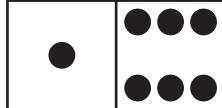
e



$$2 + 8 = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

f



$$1 + 6 = \boxed{}$$

$$\boxed{} + \boxed{} = \boxed{}$$

Addition – turnarounds

You will need:



a partner



counters



2 dice

What to do:

Decide who will go first. Roll the 2 dice. Decide which number is easiest to start with and add the numbers.

Write the fact on the fact wall. Play together until you have filled all the bricks.



Subtraction – language

When we subtract, we take away one number or amount from another.

Luka had 9 . He gave 2  to his brother. He had 7  left.

We write this as $9 - 2 = 7$

- 1 Put a – next to the words you think mean **subtract**.

subtract –

take away

find the difference

plus

add

minus

how many altogether?

- 2 Is this a subtraction story? Write or tell someone what you think. Ali had 6 . He gave 3  to his friend. How many  does he have left?

- 3 Is this a subtraction story? Write or tell someone what you think. Ali had 6 . His friend gave him 6 more . How many  does he have now?

Subtraction – take away

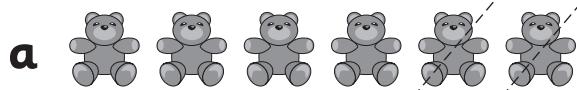
One way to subtract is to take things away or cross them out and count how many are left.



$$6 - 2 = 4$$

There are 6 milkshakes. 2 milkshakes are sold. 4 are left.

1 Cross out the pictures to match these number facts.



$$6 - 2 = 4$$



$$7 - 6 = 1$$



$$4 - 2 = 2$$



$$9 - 3 = 6$$

2 Show these picture stories as number facts.



$$\boxed{} - \boxed{} = \boxed{}$$



$$\boxed{} - \boxed{} = \boxed{}$$



$$\boxed{} - \boxed{} = \boxed{}$$



$$\boxed{} - \boxed{} = \boxed{}$$

Subtraction – take away

You will need:

-  a partner
-  scissors
-  10 counters
-  a copy of this page and page 28



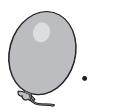
What to do:

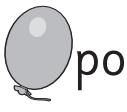
Cut out the subtraction stories and the number facts. Put the subtraction stories in a pile and turn them face down. Spread out the number facts. Player 1, take a story and find the number fact that matches and solves your story. Tell the story to your partner and show it with counters. Player 2, take your turn. Play until all the stories have been told.



Mia had 6 .

4  flew away. How many  did she have left?

Jack had 10 .

3  popped. How many  did he have left?

Subtraction – take away



7 were on the .

6 went to the .

How many stayed on the ?

9 mums and dads came on the class .

4 got scared and had to go .

How many mums and dads stayed?

Nadia borrowed 5 .

She read 2 and gave them back. How many does she still have?

Dad cooked 8 for lunch.

2 were left. How many were eaten?

$$6 - 4 = 2$$

$$10 - 3 = 7$$

$$7 - 6 = 1$$

$$9 - 4 = 5$$

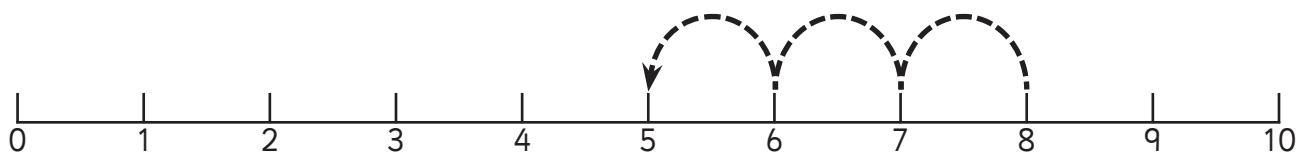
$$5 - 2 = 3$$

$$8 - 6 = 2$$

Subtraction – counting back

Another way to subtract is to count back. Number lines can help us do this as counting backwards can be tricky!

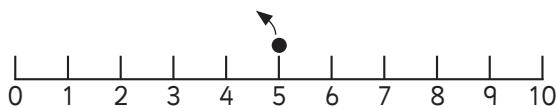
$$8 - 3 = \boxed{?}$$



We start at 8 and jump back 3 spaces.

$$8 - 3 = 5$$

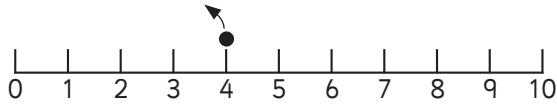
1 Count back using the number line. Finish the number facts.



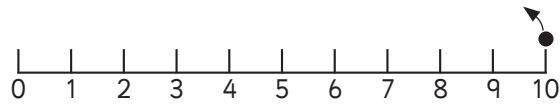
a $5 - 3 = \boxed{}$



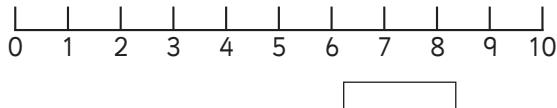
b $9 - 2 = \boxed{}$



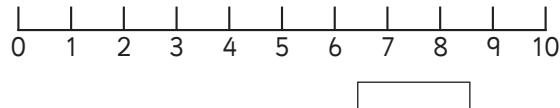
c $4 - 2 = \boxed{}$



d $10 - 5 = \boxed{}$



e $7 - 6 = \boxed{}$



f $10 - 2 = \boxed{}$



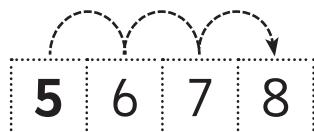
Remember we count the **jumps or spaces**, not the numbers!

Subtraction – counting on

Counting on is an addition strategy but it is also a useful way to solve subtraction problems. We start at the smaller number and count on to get to the bigger number.

$$8 - 5 = \boxed{?}$$

We start at 5. We count on till we get to 8.



We counted on 3 more numbers.

$$8 - 5 = 3$$

- 1 Use the counting on strategy to solve these problems. Start at the smaller number and count on.

a $5 - 2 = \boxed{}$



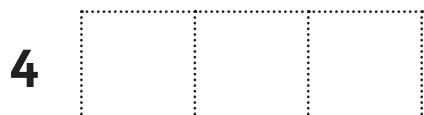
I counted on more numbers.

b $8 - 6 = \boxed{}$



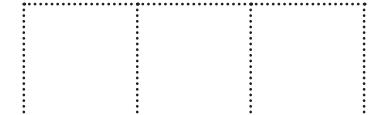
I counted on more numbers.

c $7 - 4 = \boxed{}$



I counted on more numbers.

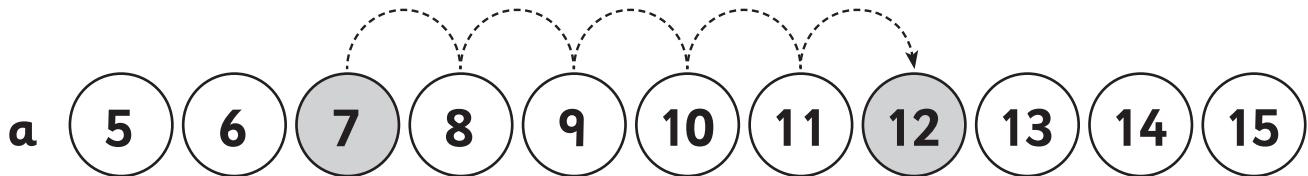
d $10 - 7 = \boxed{}$



I counted on more numbers.

Subtraction – counting on

1 Colour the 2 numbers. Jump from one to the other.
How many jumps are there? Finish the fact.



$$12 - 7 = \boxed{}$$



$$13 - 9 = \boxed{}$$



$$11 - 8 = \boxed{}$$



$$14 - 11 = \boxed{}$$

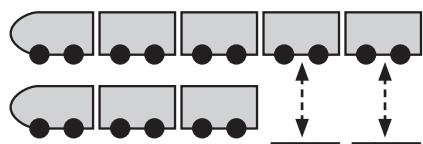


$$13 - 9 = \boxed{}$$

Subtraction – find the difference

When we subtract, we can compare 2 groups or numbers and ask ourselves, ‘What is the difference? Does one group have more than the other? Does one group have less than the other?’

Look at these 2 trains. What is the difference?



5 This train has 5 carriages.

3 This train has only 3 carriages.

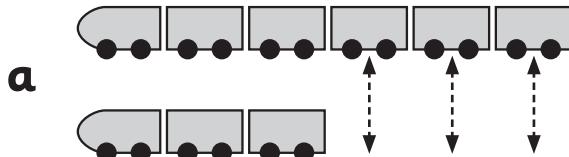
If they both had 3 carriages, they would be the same.

If they both had 5 carriages, they would be the same.

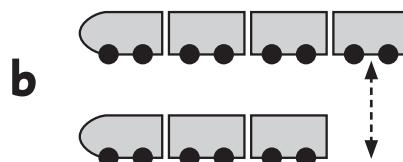
What is the difference?

The difference is 2 carriages.

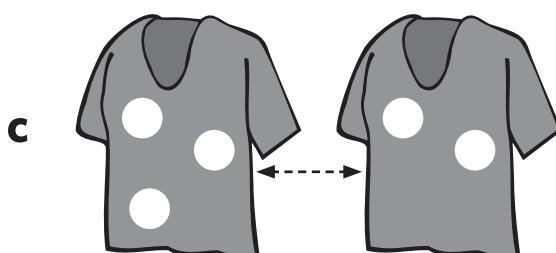
1 What is the difference?



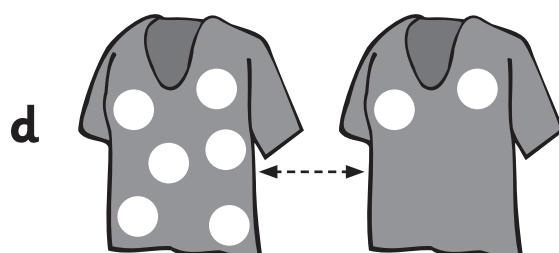
The difference is



The difference is



The difference is

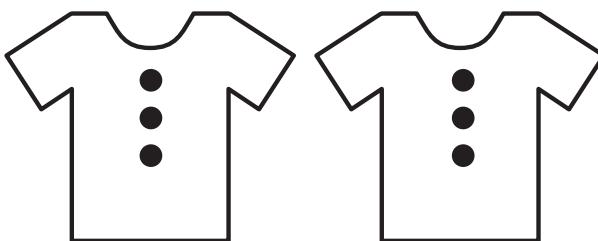


The difference is

Subtraction – find the difference

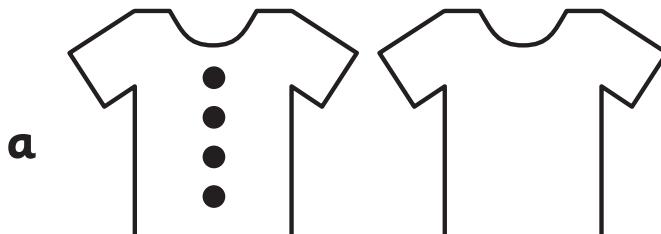
What if there is no difference?

How do we say or record that?

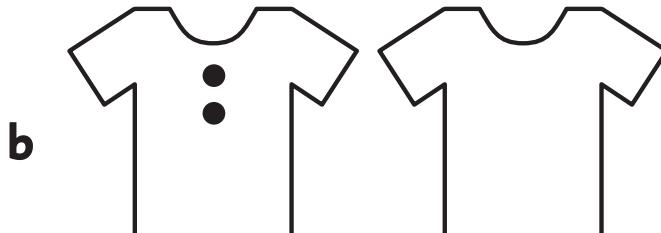


These shirts both have 3 buttons. There is **no** difference.
The difference is **0**.

1 Draw buttons to show **no difference**.



The difference is

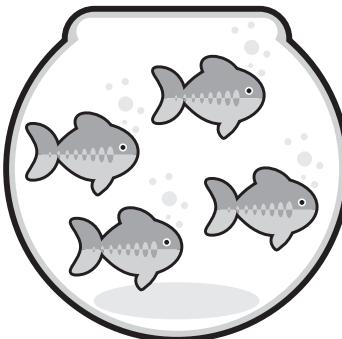


The difference is

2 Draw fish in the bowls. Make one bowl have no difference.
Make the other bowl have a difference of 2.



no difference



difference of 2

Subtraction – find the difference

You will need:



1 partner or more



scissors



counters



a copy of this page



What to do:

Cut out the number cards. Put the grey 10 card face up. Put the others in a pile face down. Each player draws one card. The person whose card has the greatest difference from 10 wins a counter. Play till all the cards are gone. Who has the most counters?

10		9	
8		7	
6		5	
4		3	
2		1	
0		10	

Subtraction – relating addition and subtraction

Addition and subtraction are related. They do up and undo each other.

You will need:  a partner  5 blue counters and 5 red counters

What to do:

- a Put out 2 blue counters. Then put out 3 red counters. What addition fact have you have made?

$$\boxed{} + \boxed{} = \boxed{}$$

- b Now take the 3 red counters away. How many blue counters are left? What subtraction fact have you have made?

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

- c Put the 3 red counters back. This time, take away the 2 blue counters. What subtraction fact have you made?

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

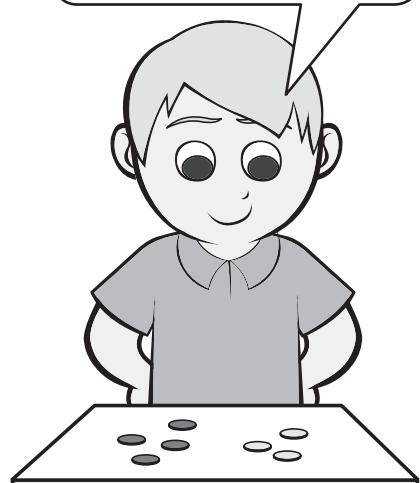
What to do next:

Use counters to make this addition fact.

$$3 + 4 = 7$$

Can you make 2 subtraction facts?

I will take away
these 3. My fact is
 $7 - 3 = 4$



Subtraction – relating addition and subtraction

If we know our addition facts, we can use them to learn our subtraction facts.

If we know $4 + 3 = 7$ 

we also know $7 - 3 = 4$ 

and $7 - 4 = 3$ 

1 addition fact gives us 2 subtraction facts.

- 1 Use 2 coloured pencils and colour the boxes to match the addition fact. Write the matching subtraction facts.

a



$$3 + 2 = 5$$

$$\boxed{5} - \boxed{2} = \boxed{}$$

$$\boxed{5} - \boxed{3} = \boxed{}$$

b

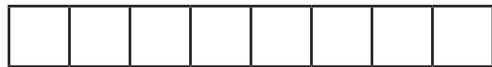


$$4 + 2 = 6$$

$$\boxed{6} - \boxed{4} = \boxed{}$$

$$\boxed{6} - \boxed{} = \boxed{}$$

c



$$5 + 3 = 8$$

$$\boxed{8} - \boxed{} = \boxed{}$$

$$\boxed{8} - \boxed{} = \boxed{}$$

- 2 Fill in the missing numbers in these facts.



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

$$\boxed{} - \boxed{} = \boxed{}$$

$$\boxed{} - \boxed{} = \boxed{}$$

Subtraction – relating addition and subtraction

Can we always make 2 subtraction facts from 1 addition fact?

You will need:  a partner  5 blue counters and 5 red counters

What to do:

- a Put out 2 blue ○○. Then put out 2 red ●●. What addition fact have you have made?

$$\boxed{} + \boxed{} = \boxed{}$$

- b Now take the 2 red ●● away. How many are left? What subtraction fact have you have made?

$$\boxed{} - \boxed{} = \boxed{}$$

- c Put the 2 red ●● back. This time, take away the 2 blue ○○. What subtraction fact have you made?

$$\boxed{} - \boxed{} = \boxed{}$$

- d What do you notice?

What to do next:

Take turns making these addition facts using red and blue counters. Ask your partner to make matching subtraction facts using the same counters. Record them here.

a $1 + 1 = \boxed{}$

$$\boxed{} - \boxed{} = \boxed{}$$

b $3 + 3 = \boxed{}$

$$\boxed{} - \boxed{} = \boxed{}$$

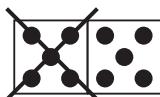
Subtraction – doubles

We can use our addition strategies help us solve subtraction problems.

Look at $10 - 5 = ?$

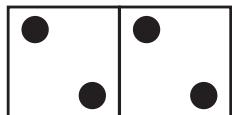
We know the doubles fact $5 + 5 = 10$ so we know that

$$10 - 5 = 5$$

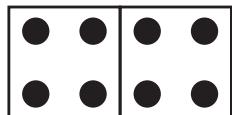


1 Cover 1 side of the domino to help solve these subtraction problems.

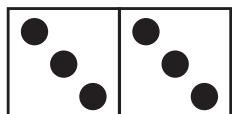
a $4 - 2 =$



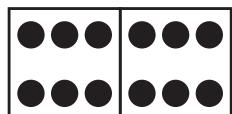
b $8 - 4 =$



c $6 - 3 =$



d $12 - 6 =$



2 Finish and match the addition and subtraction doubles number facts.

$6 + 6 =$ 12

$6 - 3 =$

$5 + 5 =$

$8 - 4 =$

$3 + 3 =$

$10 - 5 =$

$4 + 4 =$

$12 - 6 =$

Subtraction – facts to 10

1 Bessie Baker baked lots of  and made trays of 10. Marvin Muncher helped himself to the trays! Use a strategy of your choice to find how many  Marvin stole from each tray. Write the subtraction number fact.

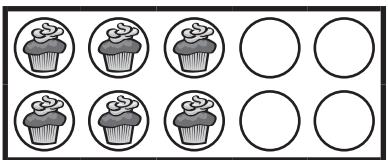


a



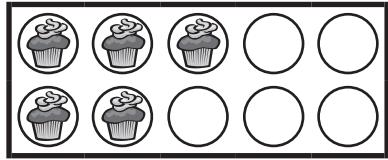
$$10 - \boxed{2} = \boxed{8}$$

b



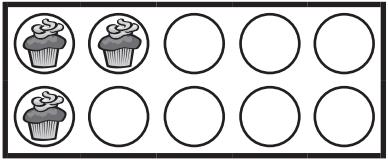
$$10 - \boxed{} = \boxed{}$$

c



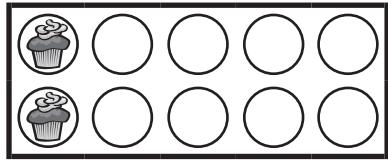
$$10 - \boxed{} = \boxed{}$$

d



$$10 - \boxed{} = \boxed{}$$

e



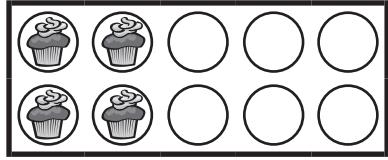
$$10 - \boxed{} = \boxed{}$$

f



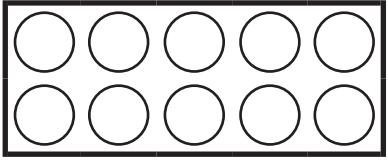
$$10 - \boxed{} = \boxed{}$$

g



$$10 - \boxed{} = \boxed{}$$

h



$$10 - \boxed{} = \boxed{}$$

Subtraction – facts to 15

You will need:



a partner



a die

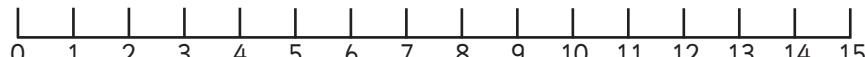


What to do:

Cut out the cards below and place them in a pile face down. Player 1, take a card and roll the die. Using a strategy of your choice, subtract the number on the die from the number on your card. Write the number fact in your maths book.

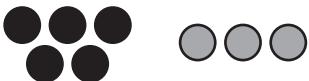
Player 2, have a turn. Play until you both have 10 facts. Ask your teacher to check your facts. Can you score $\frac{10}{10}$?

15	14	13	12	11
10	9	8	7	8
9	10	11	12	13
14	15	10	15	10

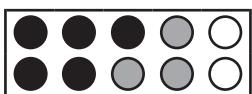


Addition and subtraction – fact families

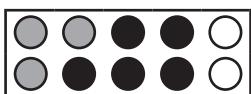
Here we have 5 black counters and 3 grey counters.

That's 8 counters altogether. 

What addition and subtraction facts can we make using 3, 5 and 8?



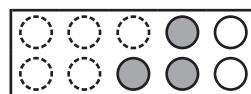
$$5 + 3 = 8$$



$$3 + 5 = 8$$



$$8 - 3 = 5$$

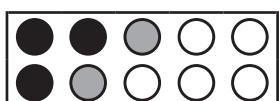


$$8 - 5 = 3$$

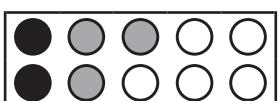
We can make 4 facts. This is called a fact family.

1 Write the fact family.

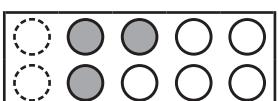
a



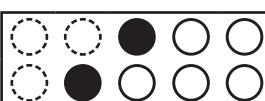
$$3 + 2 = 5$$



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

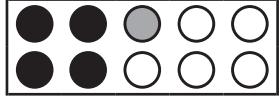


$$5 - 2 = \boxed{}$$

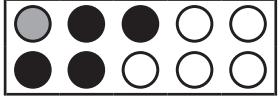


$$5 - \boxed{} = \boxed{}$$

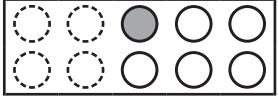
b



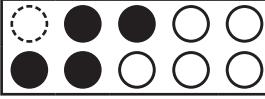
$$4 + \boxed{} = \boxed{}$$



$$1 + \boxed{} = \boxed{}$$

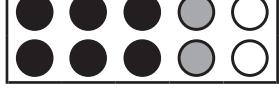


$$5 - \boxed{} = \boxed{}$$



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

c



$$\boxed{} + \boxed{} = \boxed{}$$



$$\boxed{} + \boxed{} = \boxed{}$$



$$\boxed{} - \boxed{} = \boxed{}$$



$$\boxed{} - \boxed{} = \boxed{}$$

2 Use 2 coloured pencils to colour match the facts into 2 families.

$$4 + 3 = 7$$

$$7 - 4 = 3$$

$$7 - 2 = 5$$

$$7 - 3 = 4$$

$$2 + 5 = 7$$

$$3 + 4 = 7$$

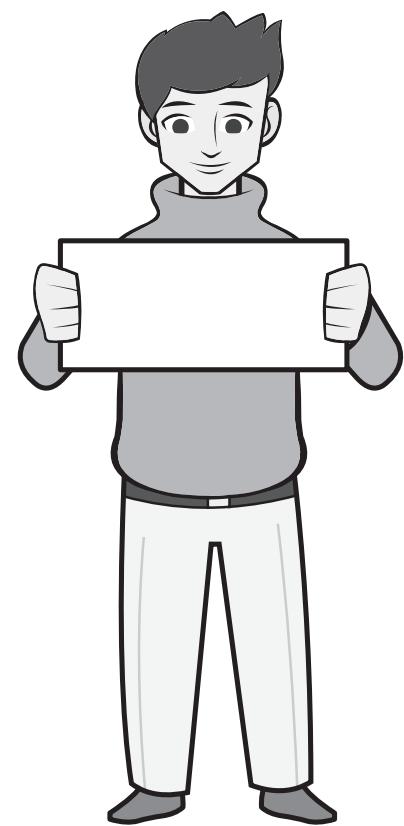
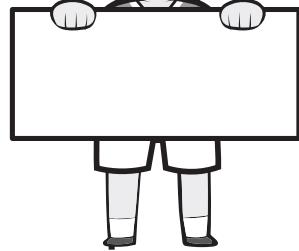
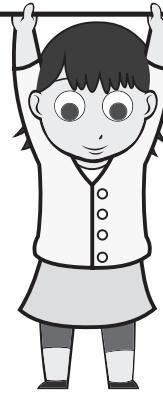
$$5 + 2 = 7$$

$$7 - 5 = 2$$

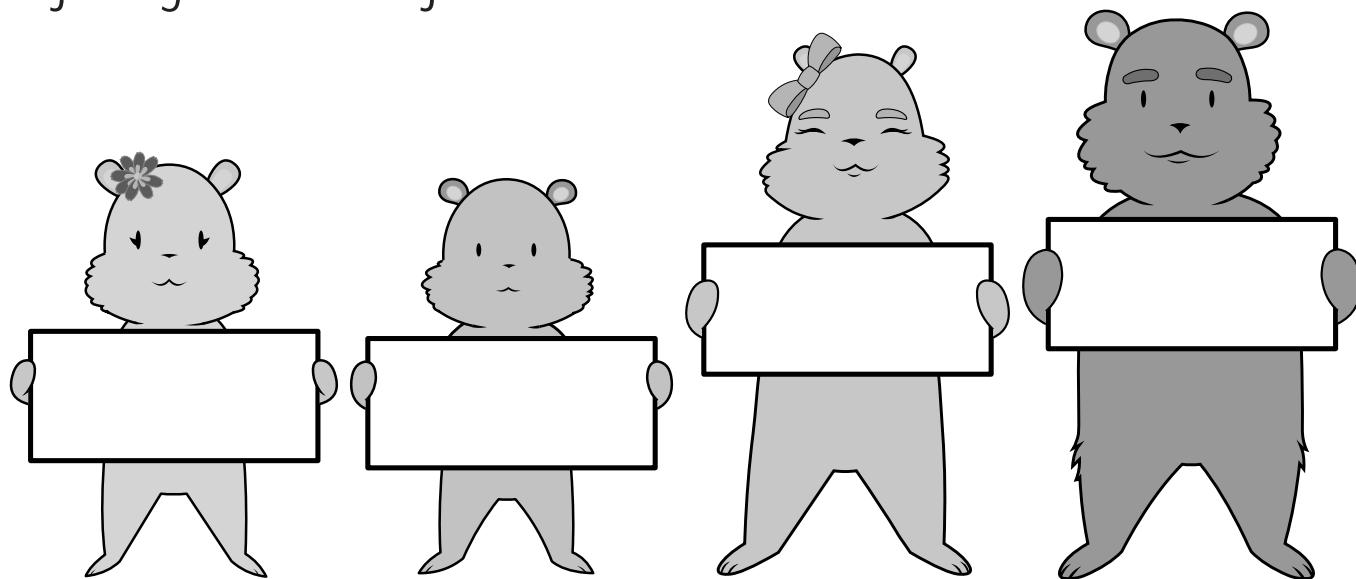
Addition and subtraction – fact families

- 1 This family only uses the numbers 3, 2 and 5. Give each family member a fact.

$$3 + 2 = 5$$



- 2 This family only uses the numbers 4, 2 and 6. Give each family member a fact.



Addition and subtraction – fact families

You will need:

-  scissors
-  tape
-  a sticky note
-  a copy of page 44

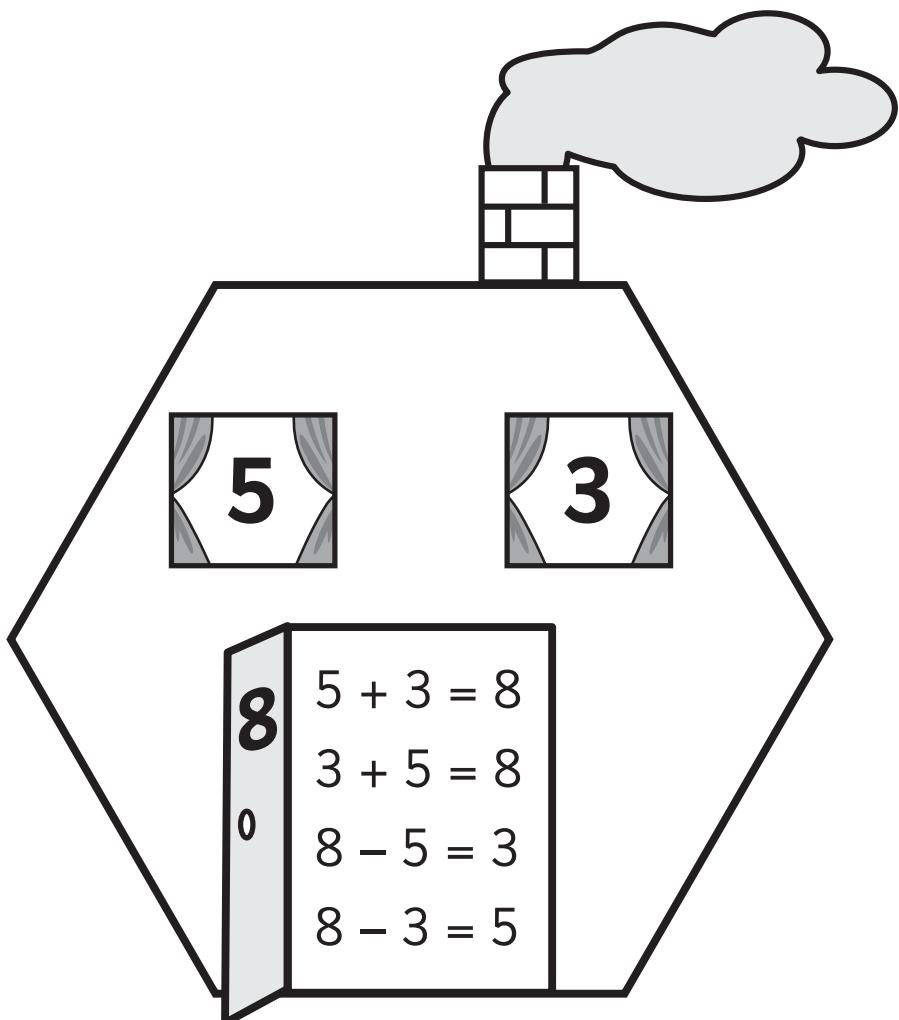
What to do:

Cut out the hexagon house on page 44. Think of 3 numbers you could make a fact family with or ask your teacher for some. Write the numbers in the windows and on the door.

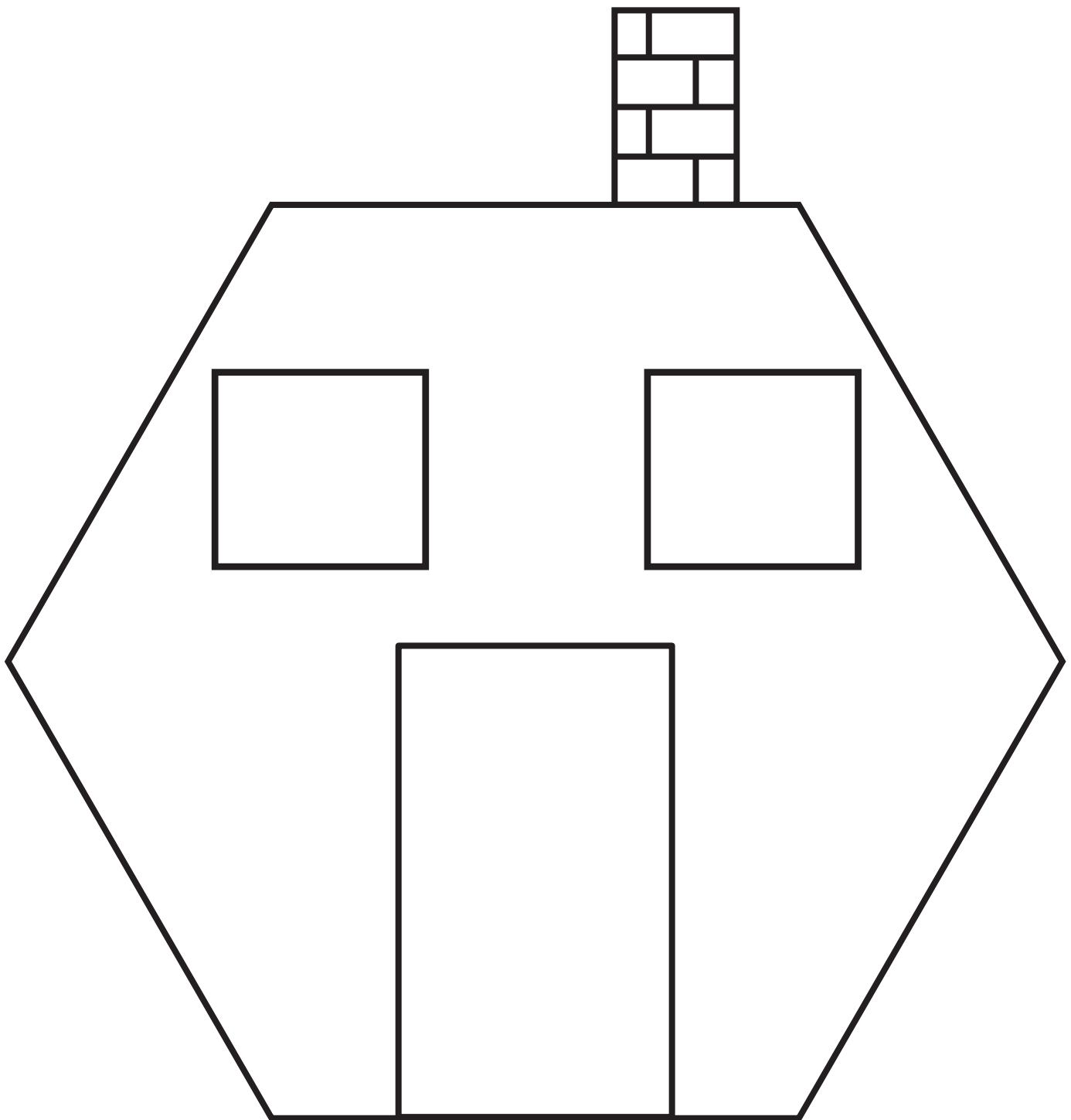
Carefully cut the door so it swings open. Tape the sticky note to the back of the hexagon behind the door. Write the matching fact family on the note so that when you open the door, you see your fact family. Decorate your house.

What to do next:

Stick the classes' houses on to the wall or onto a road made from brown paper. Stand in front of each house and tell a partner what the fact family will be. Open the door and check to see if you are right!



Addition and subtraction – fact families



Addition and subtraction – counting on 20–50

We can use number grids to help us count on.

$$22 + 1 = 23$$

$$28 + 10 = 38$$

11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

1 Count on 1 or 2 to finish these number facts.

a $35 + 1 =$

b $16 + 1 =$

c $43 + 1 =$

d $24 + 2 =$

e $41 + 2 =$

f $37 + 2 =$

2 Count on 10 to finish these number facts.

a $33 + 10 =$

b $28 + 10 =$

c $12 + 10 =$

d $14 + 10 =$

e $32 + 10 =$

f $17 + 10 =$

3 Fill in the gaps.

	+ 1	+ 2	+ 10
12	13	14	22
28		30	
33			43
40	41		

Addition and subtraction – counting back 20–50

We can also use number grids to help us count back.

$$34 - 1 = 33$$

$$47 - 10 = 37$$

11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

1 Count back 1 or 2 to finish these number facts.

a $25 - 1 =$

b $12 - 1 =$

c $39 - 1 =$

d $23 - 2 =$

e $36 - 2 =$

f $44 - 2 =$

2 Count back 10 to finish these number facts.

a $50 - 10 =$

b $35 - 10 =$

c $22 - 10 =$

d $26 - 10 =$

e $24 - 10 =$

f $41 - 10 =$

3 Fill in the gaps.

	- 1	- 2	- 10
23			13
49		47	
31	30		
20		18	

Addition and subtraction – explore

You will need:



a partner



scissors



counters



What to do:

Cut out the number cards below and put them in a pile face down. Decide if you are playing an adding or subtracting game and if you are going to race against each other or take turns.

Take 2 cards and add or subtract the 2 numbers. If you are subtracting, make sure you start with the bigger number. Record your fact. Use counters to help if you want. Play until you have used all the cards. Ask your teacher to check your facts!

0	1	2	3	4
5	6	7	8	9
10	0	1	2	3
4	5	6	7	8
9	10	5	6	7

Addition and subtraction – explore

You will need:



a partner



scissors

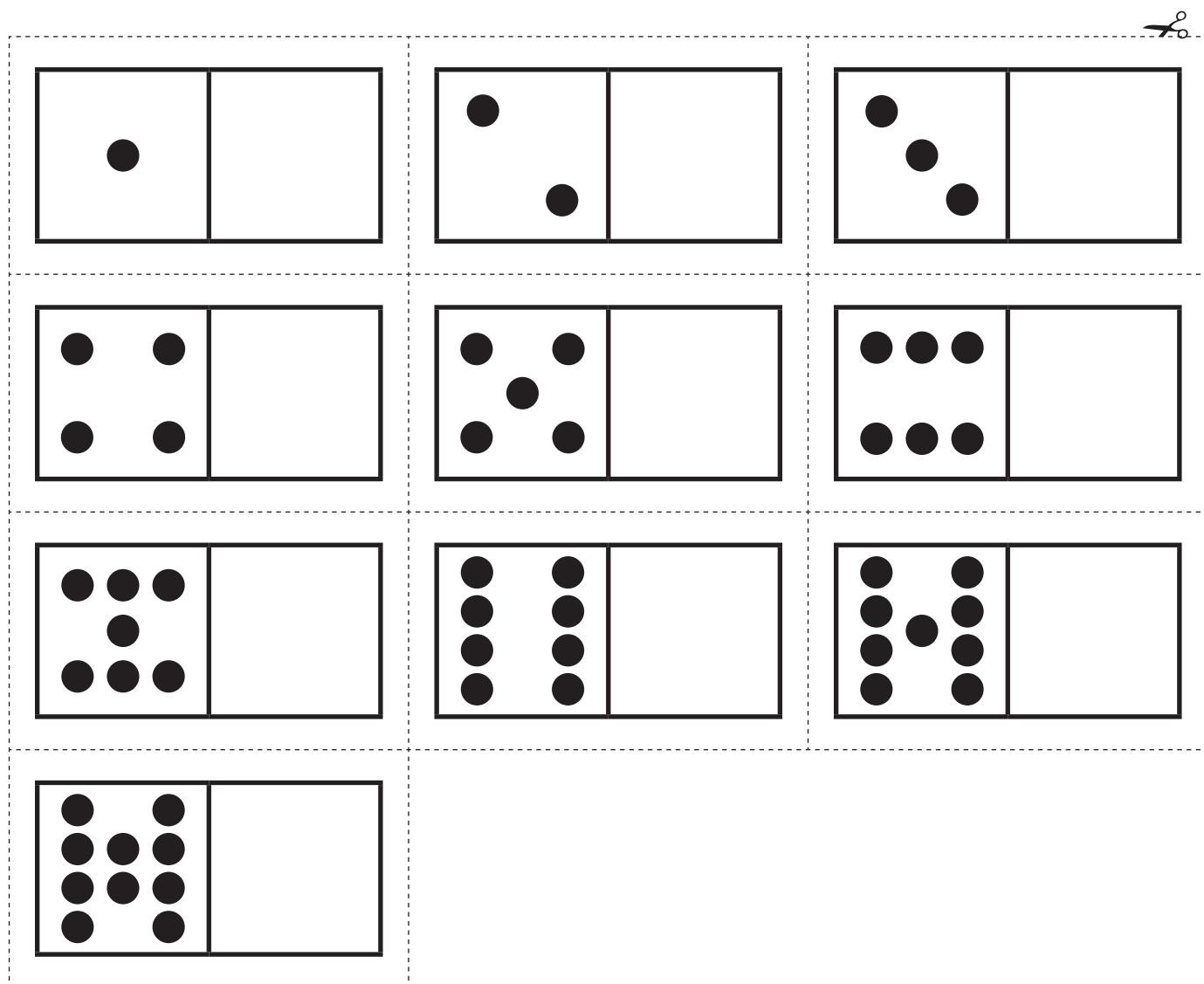


a pencil



What to do:

Draw dots on the right side to make the dominoes add to 10.
Cut out the cards and write the matching fact and its turnaround
on the back. Put them in a pile with the dots facing up.
Take turns taking a domino card. Without looking at the back,
say the matching fact and turnaround. Check. If you are right,
you keep the card! Play until they are all gone.



Addition and subtraction – explore

You will need:



3 partners



scissors



a pencil



a die



copy

What to do:

Cut out and choose a game board each. Take turns rolling a die. If you can use the number to complete one of your number facts, write it in. If not, the play moves on. The first person to fill their game board wins.



Player 1

$$\square + 3 = 6$$

$$\square + 4 = 10$$

$$\square + 2 = 4$$

$$\square - 2 = 4$$

$$\square - 1 = 2$$

Player 2

$$\square + 2 = 5$$

$$\square + 6 = 11$$

$$\square + 1 = 5$$

$$\square - 2 = 4$$

$$7 - \square = 5$$

Player 3

$$\square + 4 = 8$$

$$\square + 5 = 11$$

$$\square + 5 = 6$$

$$\square - 1 = 2$$

$$8 - \square = 6$$

Player 4

$$\square + 4 = 9$$

$$\square + 3 = 7$$

$$\square + 5 = 6$$

$$\square - 3 = 3$$

$$\square - 1 = 1$$

Addition and subtraction – explore

You will need:



a partner



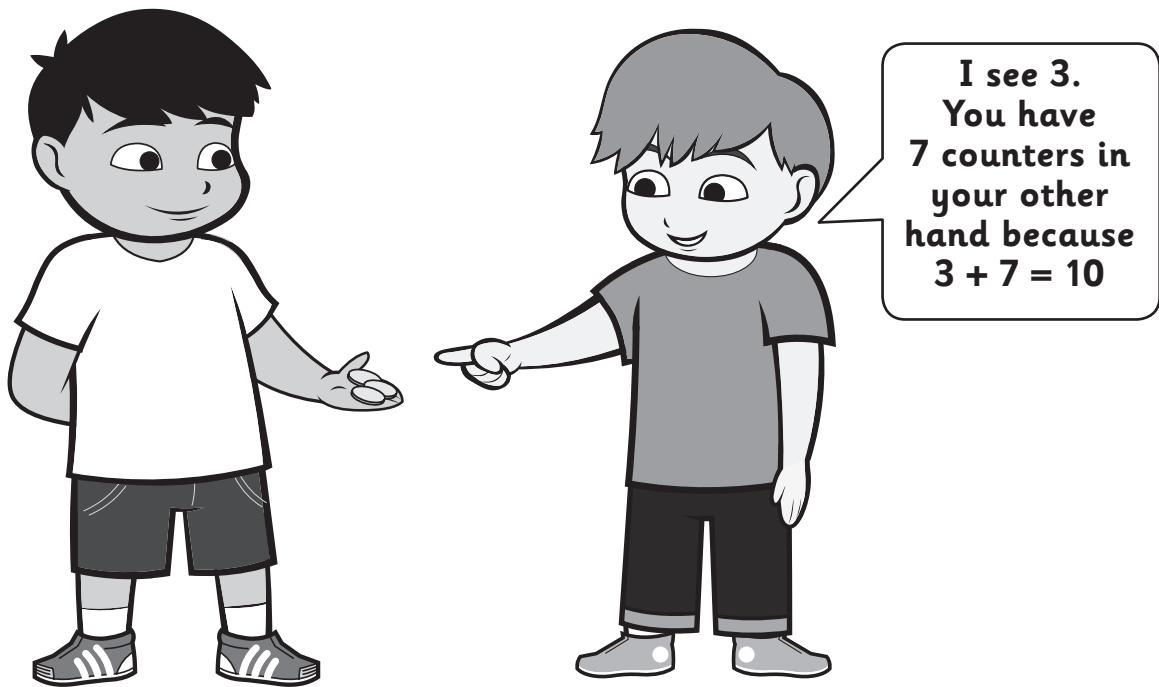
10 counters

What to do:

Player 1, put some of the 10 counters in 1 hand and some in the other hand. Put both hands behind your back.

Player 2, point to a hand. Player 1 will show you what's in that hand and your job is to guess how many counters are in **the other hand**.

If you are right, you score a point. Swap roles. The first person to 5 points, wins.



What to do next:

Too easy? Play the game with 15 or 20 counters.

Addition and subtraction – explore

You will need:  partners  a die

 a mini packet of Smarties or sultanas each

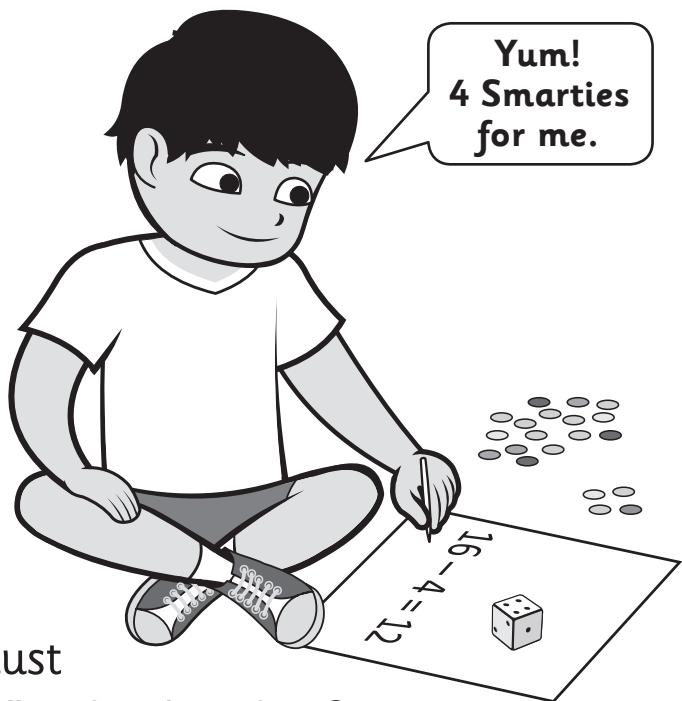
What to do:

Count how many Smarties or sultanas are in your packet.

Take turns rolling the die.

Subtract that number of Smarties, then say and write your number fact. If you are right, those Smarties are yours to be eaten!

Play until you get to zero. You must roll the exact number to finish. Who finishes first?



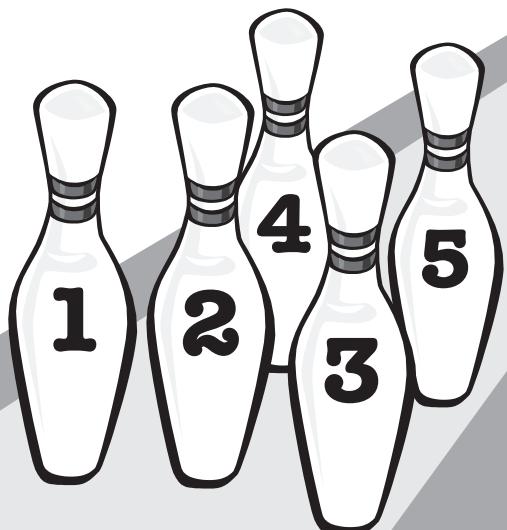
My number facts:

Addition and subtraction – explore

What to do:

Look at the bowling pins. Which pins could you knock down to score 6?

Find 2 different ways and record them below. Remember, you can knock down more than 2 pins!



What to do next:

Find 2 different ways to score 7 and 8.

My facts:

Addition and subtraction – mixed word problems

Sometimes the tricky part of a word problem is not doing the fact, but working out whether you need to add or subtract.

We need to think, ‘Does this problem want me to join groups? Then I know I am adding. Am I comparing groups or taking a group away? Then I know I am subtracting.’

Looking out for clue words can help too. These are words like **altogether**, **difference** and **left**. They tell us if we are adding or subtracting.

- 1 Work out if the problem is asking you to add or subtract and write the number fact to match. Circle the clue words.

a Ellie eats 3 .

Then she eats 4 more.

How many  does she eat altogether?

$$\boxed{} \quad \boxed{} \quad \boxed{} = \boxed{}$$

b Thomas had 8 .

5 sailed away.

How many  did he have left?

$$\boxed{} \quad \boxed{} \quad \boxed{} = \boxed{}$$

c There are 20 .

6 roll away.

How many  are left?

$$\boxed{} \quad \boxed{} \quad \boxed{} = \boxed{}$$

d Bronte has 3 .

Lucy has 9 .

How many teddies do they have altogether?

$$\boxed{} \quad \boxed{} \quad \boxed{} = \boxed{}$$

Addition and subtraction – mixed word problems

1 Solve:

- a At the start of the day there were 10 .
At the end of the day there were 3  left.
How many  were sold?

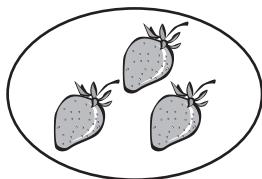
- b Ari planted 6 . Then he planted some more. Now he has 13  in his garden. How many more  did he plant?

- c Choose a number between 5 and 20. Write it in the box. How many addition and or subtraction facts can you write that include this number?

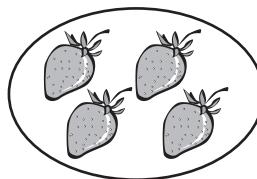
Multiplication – equal groups

When we count in groups, the groups must be **equal** or the **same**. Are these groups equal?

3 strawberries



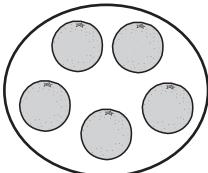
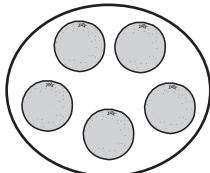
4 strawberries



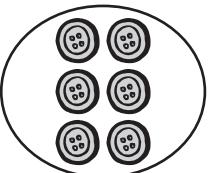
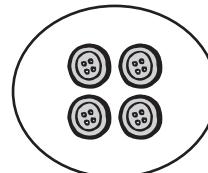
No, one group has 1 more strawberry. They are **not equal**.

- 1 Are these groups equal? If so, draw =. If not, draw ≠ in the boxes.

a



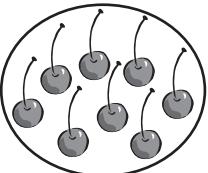
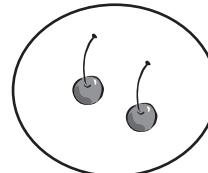
b



c

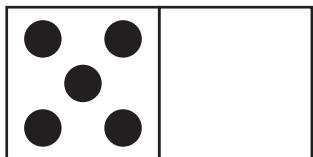


d

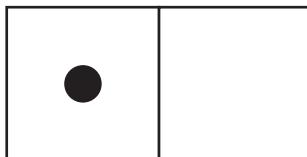


- 2 Draw dots on the right side of the dominoes to make them equal.

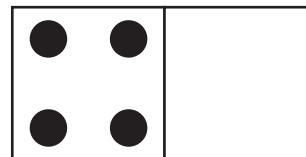
a



b



c



- 3 Mmmmm, lollies.

Draw some lollies on the bags. Make sure each bag has the same amount. This means they are equal.



Multiplication – equal groups

How many bananas? Let's look at these equal groups.



2



2



2

There are **3** bunches of .

There are **2** in each bunch.

There are **6** altogether.

1 How many ...



2

bunches of

3



altogether.



bags of



altogether.



plates of



altogether.



bowl of

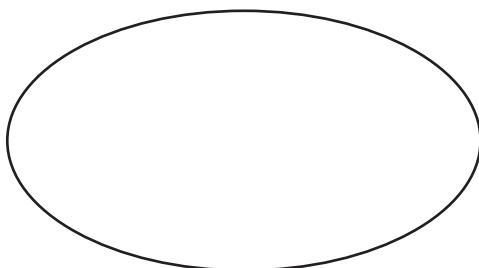
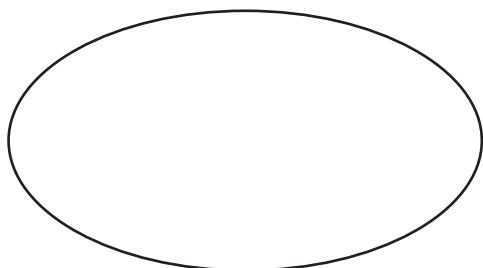


altogether.

Multiplication – equal groups

1 Draw and finish the number facts.

a Draw 3 cupcakes on each plate.



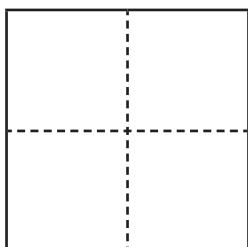
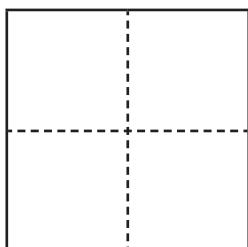
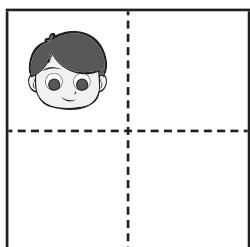
How many cakes?

groups of



altogether.

b Draw 4 faces in each window.



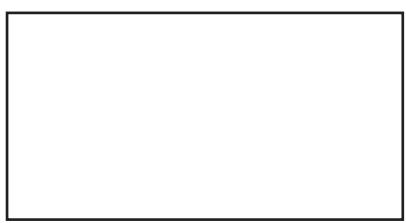
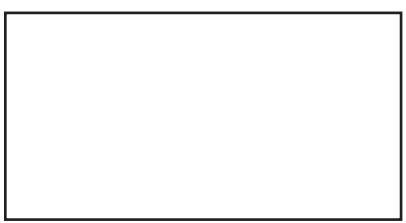
How many faces?

groups of



altogether.

c Draw 2 cats on each mat.



How many cats?

groups of



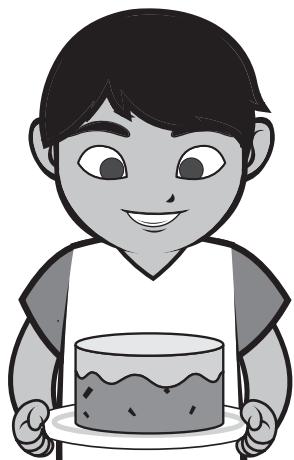
altogether.

Multiplication – equal groups

You will need:  pencils

What to do:

These children are all turning 5 today.



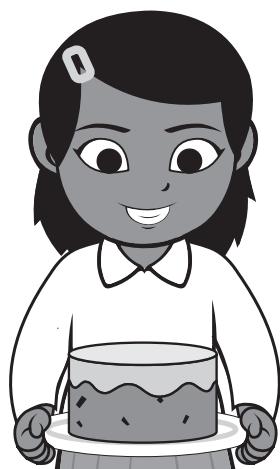
Tom



Tia



Tim



Tara

- a** Draw the right number of candles on the cakes.
- b** How many candles are there altogether?

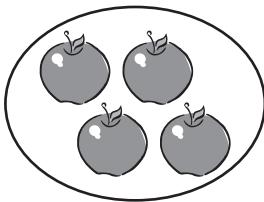
What to do next:

How did you work it out? Explain your strategy to a partner.

Multiplication – groups and arrays

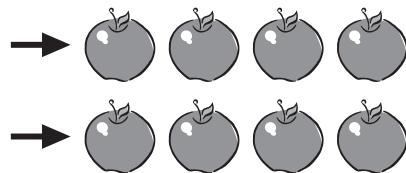
We can arrange objects into **groups** or into **rows**.

This is **2** groups of **4** apples.



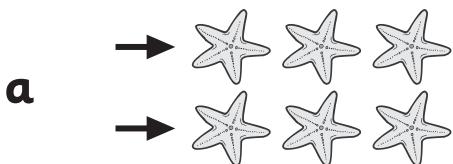
There are **8** apples altogether.

This is **2** rows of **4** apples.



There are still **8** apples altogether.

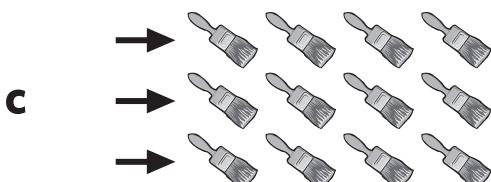
1 How many are there?



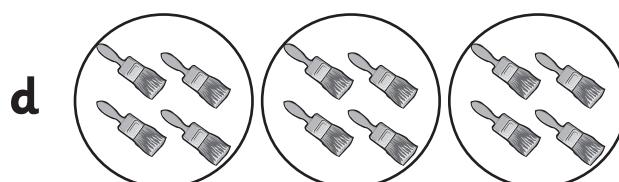
rows of is



groups of is



rows of is



groups of is

2 Draw:

a 2 groups of 3 flowers

How many flowers?

b 2 rows of 3 flowers

How many flowers?

Multiplication – groups and arrays

You will need:



pencils



counters



a partner

What to do:

Work with your partner to find solutions for the following problems. Use counters or draw pictures to help.

- a** There are 5 sail boats at sea. Each boat carries 3 sailors.
How many sailors are at sea?

- b** 1F line up after lunch in pairs. There are 8 sets of pairs.
How many students in 1F?

- c** 1F have planted a flower garden. They have planted 5 flowers in each row. There are 15 flowers altogether. How many rows are there?

Multiplication – meaning of \times symbol

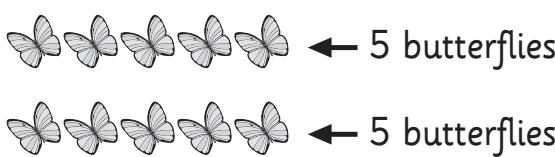
We know that ...

+ means add or join - means subtract = means the same as

What does \times mean? It means 'of'.

$$2 \times 5$$

We have 2 rows of 5 butterflies



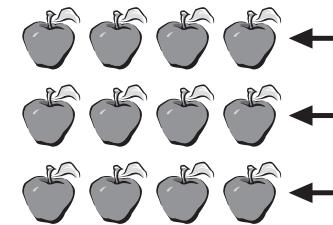
← 5 butterflies

← 5 butterflies

2 rows of 5 is 10 altogether. $2 \times 5 = 10$

1 How many?

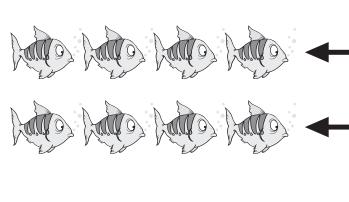
a



← 3 rows of 4 apples is ← 4 apples

← × =

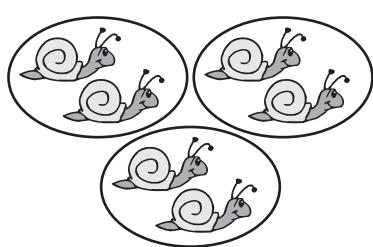
b



← 2 rows of 5 fish is ← 5 fish

← × =

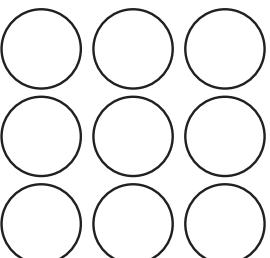
c



← 3 groups of 2 snails is ← 2 snails

← × =

2 Draw 3 rows of faces. Put 3 faces in each row.



3 rows of 3 is

3 × 3 =

Multiplication – explore

You will need:



a partner



counters



an eraser



What to do:

Cut out the cards and put them in a pile. Take turns taking a card. Make the fact with counters, then write the answer in the box. Ask your partner to check. If it's right, you keep the card. If it's wrong, rub out your answer and put the card on the bottom of the pile. Play until all the cards are gone.



6 rows of 2

$$6 \times 2 =$$

3 rows of 3

$$3 \times 3 =$$

2 rows of 4

$$2 \times 4 =$$

4 rows of 3

$$4 \times 3 =$$

1 row of 7

$$1 \times 7 =$$

2 rows of 5

$$2 \times 5 =$$

2 rows of 8

$$2 \times 8 =$$

3 rows of 2

$$3 \times 2 =$$

5 rows of 1

$$5 \times 1 =$$

1 row of 5

$$1 \times 5 =$$

4 rows of 2

$$4 \times 2 =$$

2 rows of 2

$$2 \times 2 =$$

Multiplication – explore

You will need:



a partner



2 dice



cubes



sticky notes

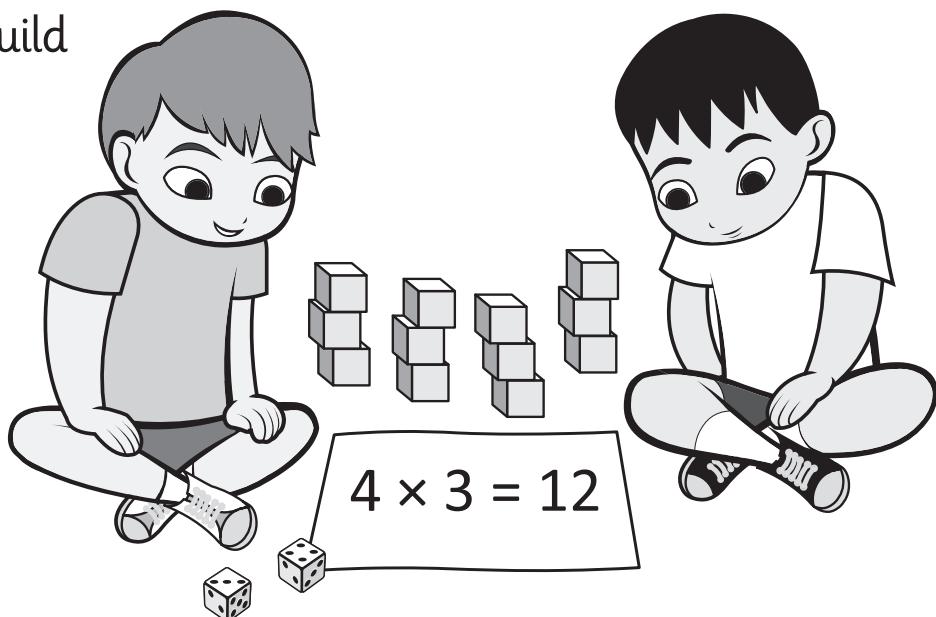
What to do:

You are about to build towers. One of you will roll for the number **of** towers, one of you will roll for the number of cubes **in** the tower. Decide who does what.

Roll both dice, then build the matching towers.

On a sticky note, write the matching fact and put it in front of the towers.

Play until you have created 5 facts.



What to do next:

Take turns building a set of towers. Your partner works out what fact it shows and writes it.

Division – sharing (partition)

When we share things into groups evenly, every group has the same number. This means they are **equal**.

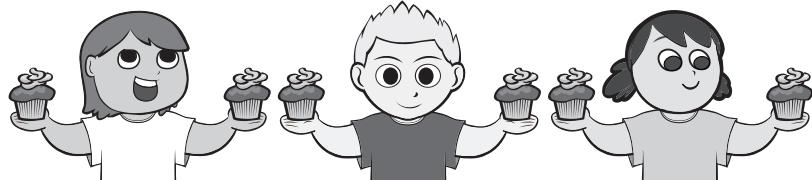
Here are **6** cupcakes.



Here are **3** children.



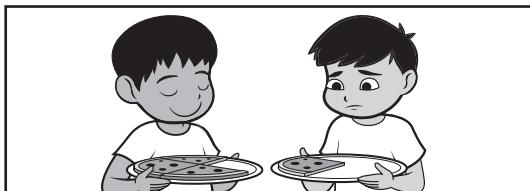
If we share the cakes out evenly, every child gets 2 cupcakes. Yum!



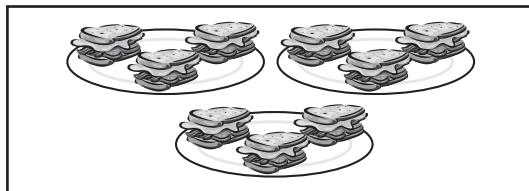
We call these **fair shares** because they are equal.

- 1 Look at these shares. Are they fair? the fair shares.
 the ones that are not fair.

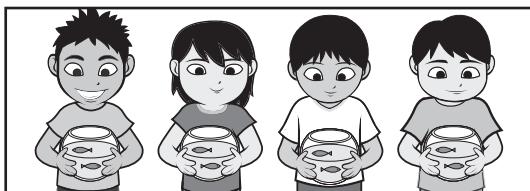
a



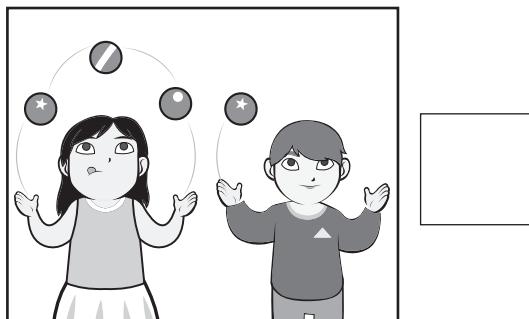
b



c



d



- 2 Draw some flowers in the pots so that all the pots are **equal**. This means they have the same number of flowers.



Division – sharing (partition)

You will need:



a partner



What to do:

Cut out the bears and honey pots.

Share out the honey pots so that each bear gets a fair share of the honey pots.

How many does each get?



What to do next:

a Put the back. Hide 4 behind your back.

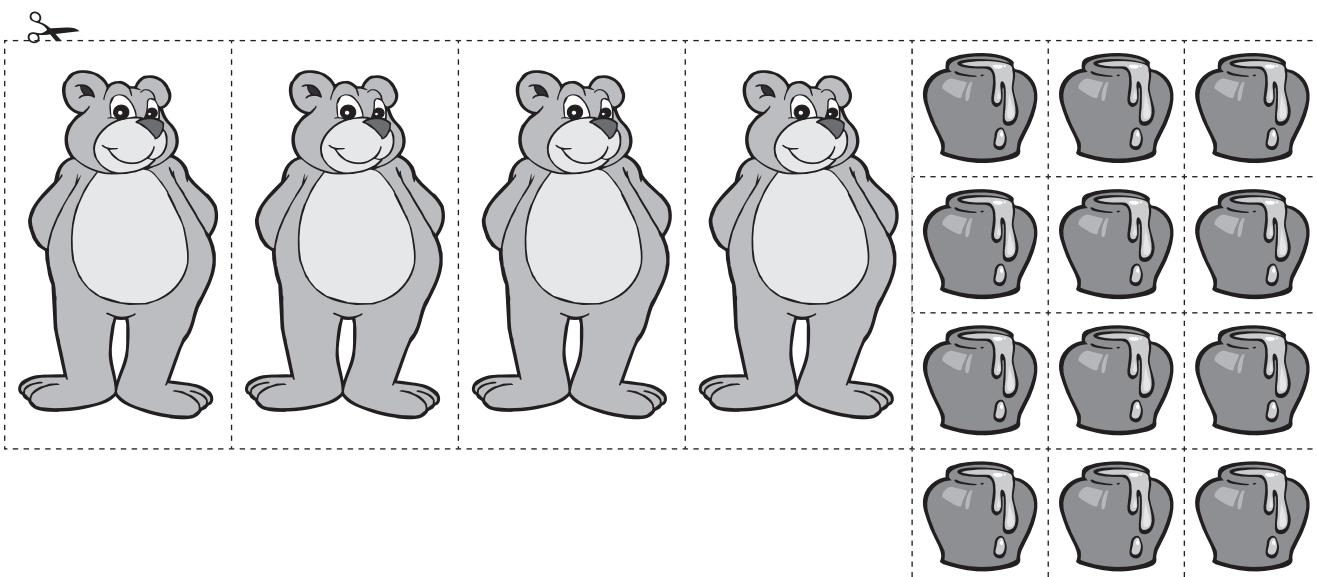
How many does each get now?



b Put the back. Hide 2 behind your back.



Now you have 2 . How many does each get now?



Division – sharing (partition)

You will need:  a partner  counters

What to do:

Use counters or draw pictures to solve these **fair share** problems. Show how you solved the problem.

- a There are 10  on 5 .

How many  are there on each ?

- b There are 8  and 4 toy .

How many  does each  get?

- c 6  lay 12 .

How many  does each  lay?

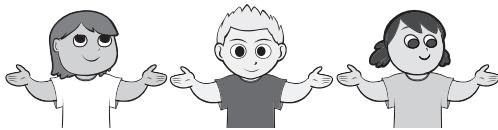
Division – remainders

Sometimes we have leftovers when we try to make fair shares.

Here are **8** cupcakes.



Here are **3** children.

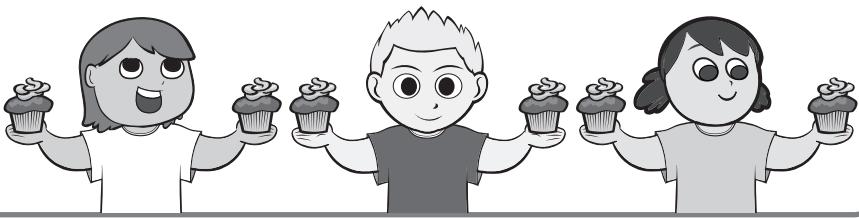


When we share them out, we can give 2 to each .

The shares are fair.

But we have

2 left over.



- 1 Use counters or draw pictures to work out whether we can make fair shares without leftovers.

a Share 5 between 2 . Can we make fair shares?



b 7 go on a . They sit in pairs. Does everyone have a partner?



Division – grouping (quotition)

Sometimes, we know how many things we want in a group but we don't know how many groups we can make.

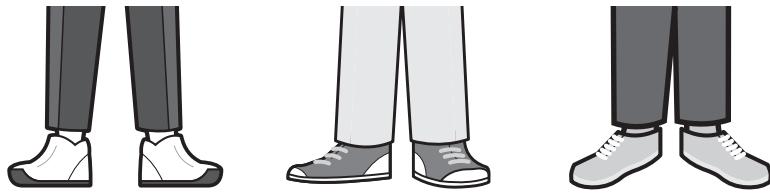
Each  needs 2 . We have 6 . How many  can we decorate?



We can decorate 3 .

1 Circle groups of 2 feet.

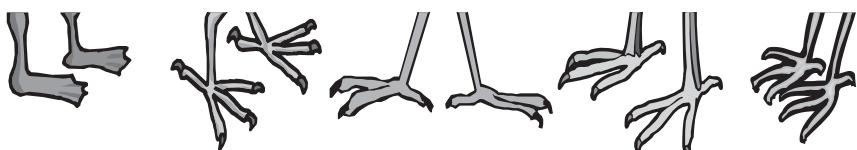
a How many boys?



b How many girls?



c How many birds?



2 Draw 24 sets of  eyes. Circle groups of 2.

How many ?

Division – grouping (quotition)

You will need:  a partner  24 popsticks

What to do:

You are at the zoo. Pretend the popsticks are animal legs and work out how many animals could be at the zoo. Use all 24 popsticks for each question. Show your solutions.

a How many  are at the zoo?

b How many  are at the zoo?

c How many  are at the zoo?

d How many  are at the zoo?