Mathletics

Series B Student

Operations with Number

My name

First edition printed 2009 in Australia.

A catalogue record for this book is available from 3P Learning Ltd.

ISBN 978-1-921860-12-6

Published 3P Learning Ltd

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Series B – Operations with Number

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Series Author:

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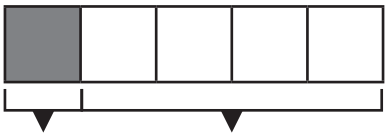
Number bonds up to 10 – 5 (five)

We call the pairs of numbers that make a particular total **number bonds**. Here we are learning about number bonds to 5.

There are 5 cubes altogether.

There is 1 grey cube.



There are 4 white cubes.

1 + 4 = 5 ◂ How many cubes are there altogether?

There are 4 different number sentences we can write for this number bond.

Can you see these in the picture?

$1 + 4 = 5$

$4 + 1 = 5$

$5 - 1 = 4$

$5 - 4 = 1$

1 Write down one addition and one subtraction sentence for each picture.

a

☐ + ☐ = ☐

☐ – ☐ = ☐

b

☐ + ☐ = ☐

☐ – ☐ = ☐

Number bonds up to 10 – 5 (five)

1 Write down one addition and one subtraction sentence for each picture.

a

□ + □ = □

□ − □ = □

b

□ + □ = □

□ − □ = □

c

□ + □ = □

□ − □ = □

d

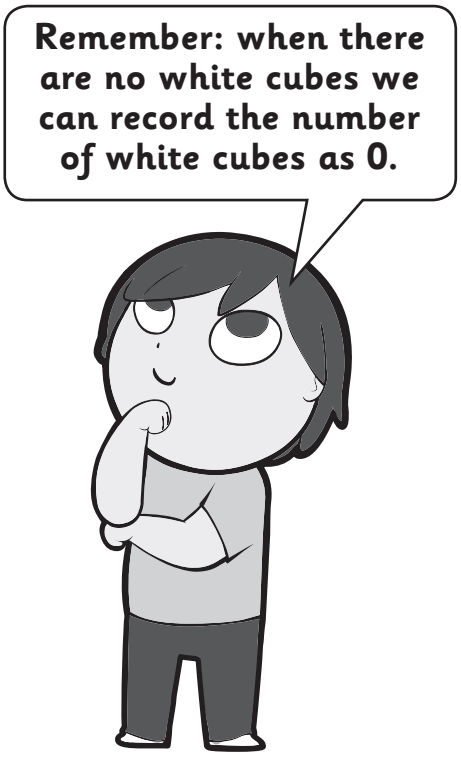
□ + □ = □

□ − □ = □

e

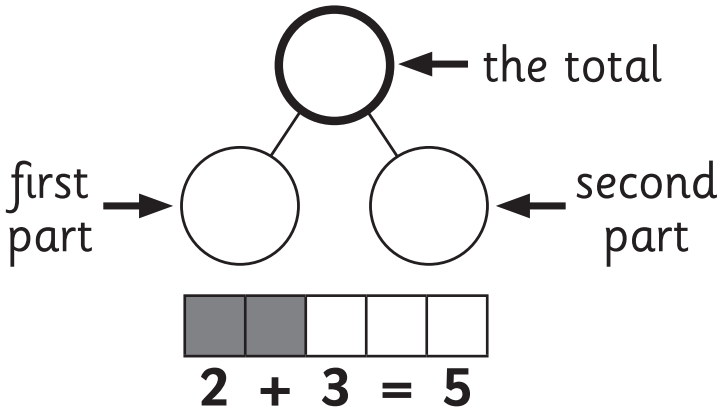
□ + □ = □

□ − □ = □

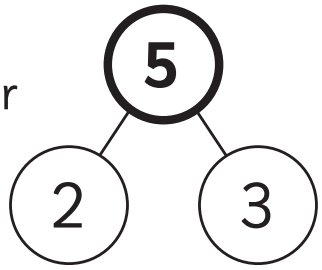


Number bonds up to 10 – 5 (five)

Number bonds can also be shown like this.



We can put this number bond into the model.

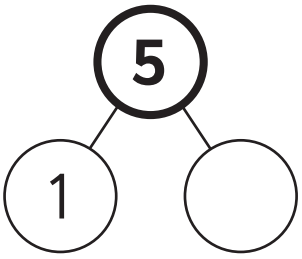


We can write 4 number sentences for this part-whole model.

$2 + 3 = 5$ $\quad$ $5 - 2 = 5$

$3 + 2 = 5$ $\quad$ $5 - 3 = 2$

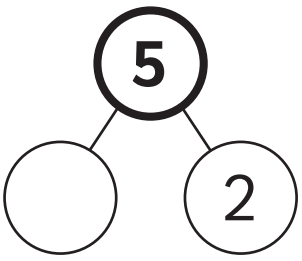
1 Write the missing number and complete the addition sentence.



$1 + \square = 5$

$\square + 1 = 5$

2 Write the missing number and complete the subtraction sentence.



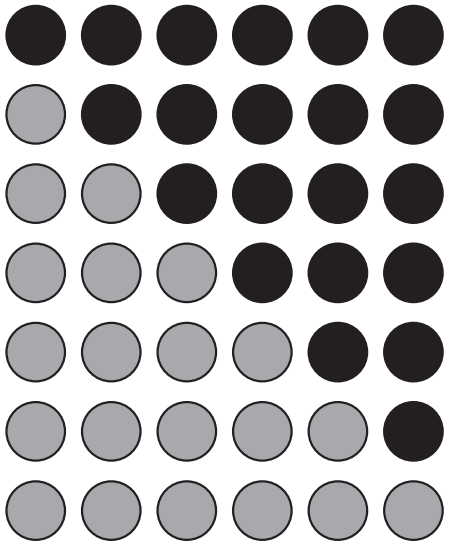
$5 - \square = 3$

$5 - \square = \square$

Number bonds up to 10 – 6 (six)

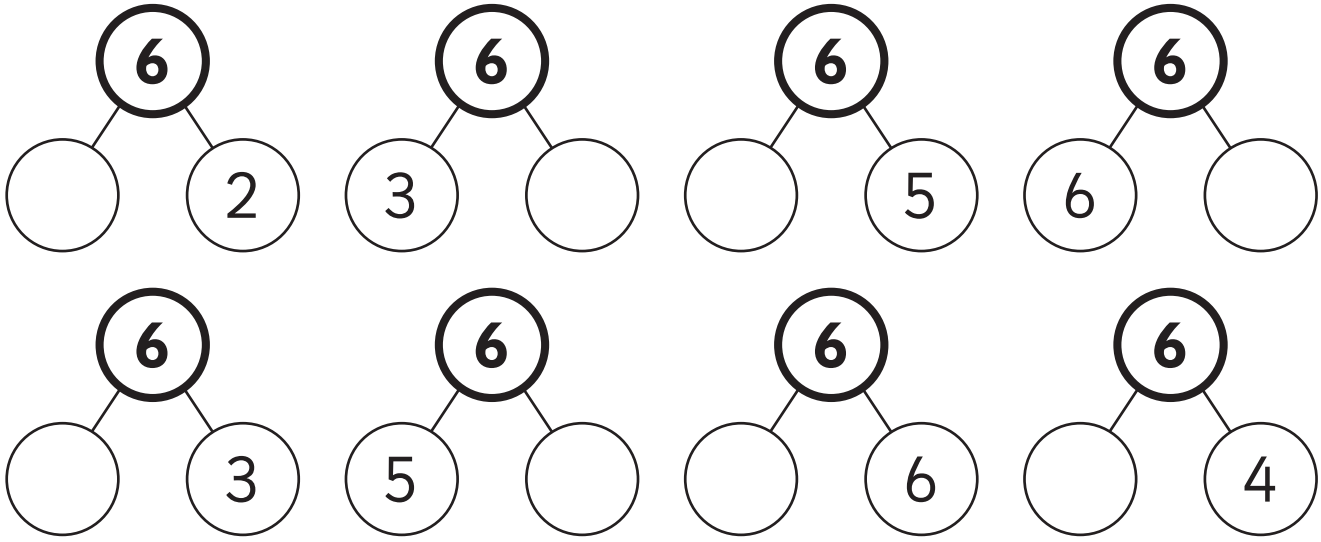
Number bonds to 6 are all pairs of numbers that add together to make 6. Knowing our number bonds helps us to solve number problems.

1 Use the pattern to complete the addition and subtraction number sentences.



0 + 6 = 6	6 – 6 = 0
1 + ☐ = 6	6 – 5 = 1
2 + 4 = 6	6 – 4 = ☐
3 + ☐ = 6	6 – 3 = 3
4 + 2 = 6	6 – 2 = ☐
5 + ☐ = 6	6 – 1 = 5
6 + ☐ = 6	6 – 0 = ☐

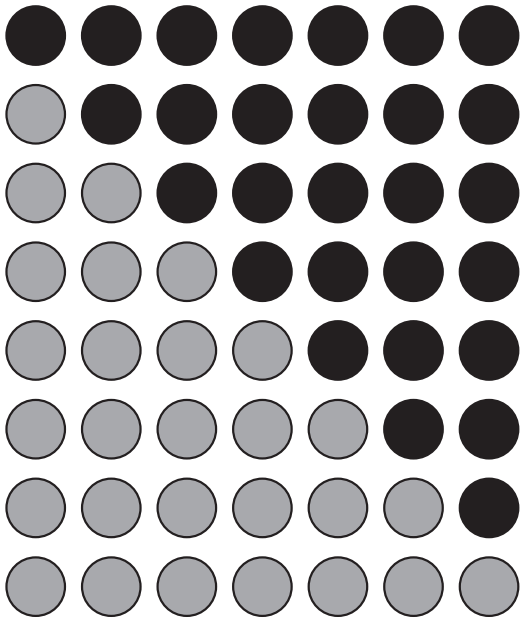
2 Complete these part-whole models.



Number bonds up to 10 – 7 (seven)

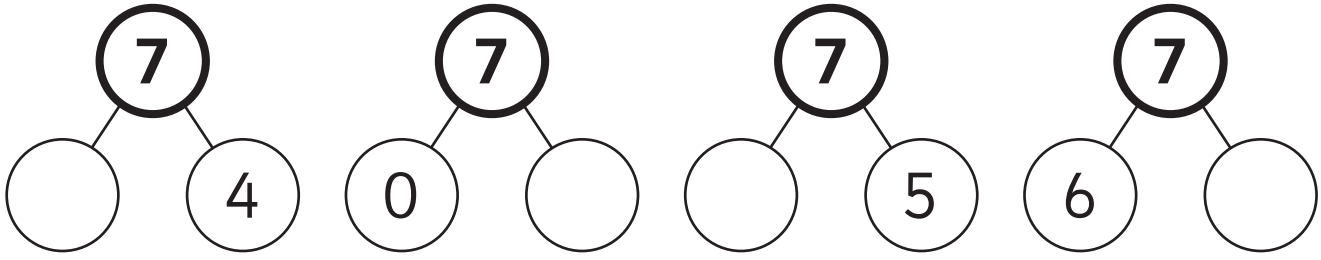
Number bonds to 7 are all pairs of numbers that add together to make 7. Knowing our number bonds helps us to solve number problems.

1 Use the pattern to complete the addition and subtraction number sentences.



0 + 7 = 7	7 – 7 = 0
1 + ☐ = 7	7 – 6 = ☐
2 + ☐ = 7	7 – 5 = ☐
3 + 4 = 7	7 – 4 = 3
4 + ☐ = 7	7 – 3 = ☐
5 + 2 = 7	7 – 2 = 5
6 + ☐ = 7	7 – 1 = ☐
7 + 0 = 7	7 – 0 = ☐

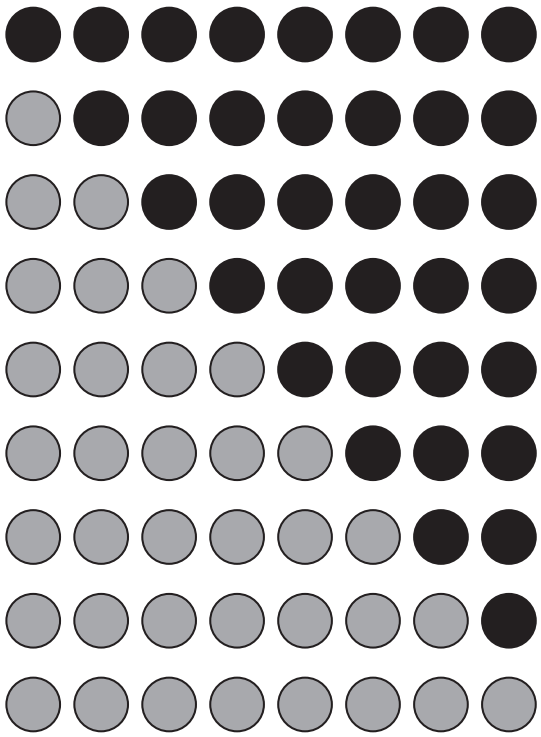
2 Complete these part-whole models.



Number bonds up to 10 – 8 (eight)

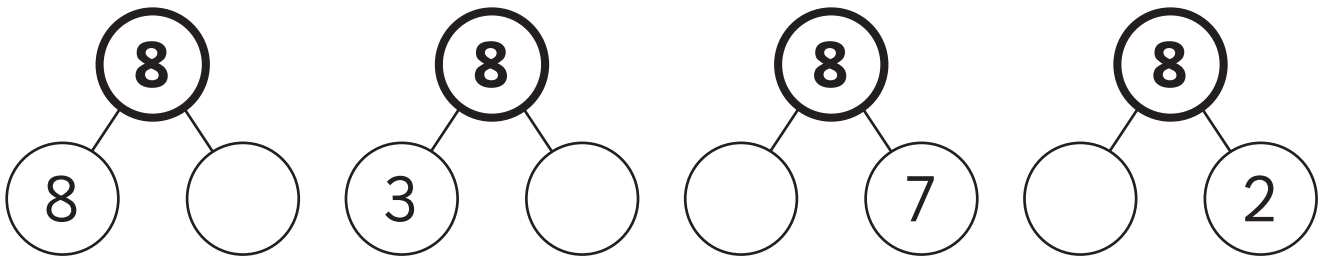
Number bonds to 8 are all pairs of numbers that add together to make 8. Knowing our number bonds helps us to solve number problems.

1 Use the pattern to complete the addition and subtraction number sentences.



0 + 8 = 8	8 – 8 = 0
1 + 7 = 8	8 – 7 = ☐
2 + 6 = 8	8 – 6 = ☐
3 + ☐ = 8	8 – 5 = 3
4 + ☐ = 8	8 – 4 = 4
5 + ☐ = 8	8 – 3 = ☐
6 + 2 = 8	8 – 2 = 6
7 + ☐ = 8	8 – 1 = ☐
8 + ☐ = 8	8 – 0 = 8

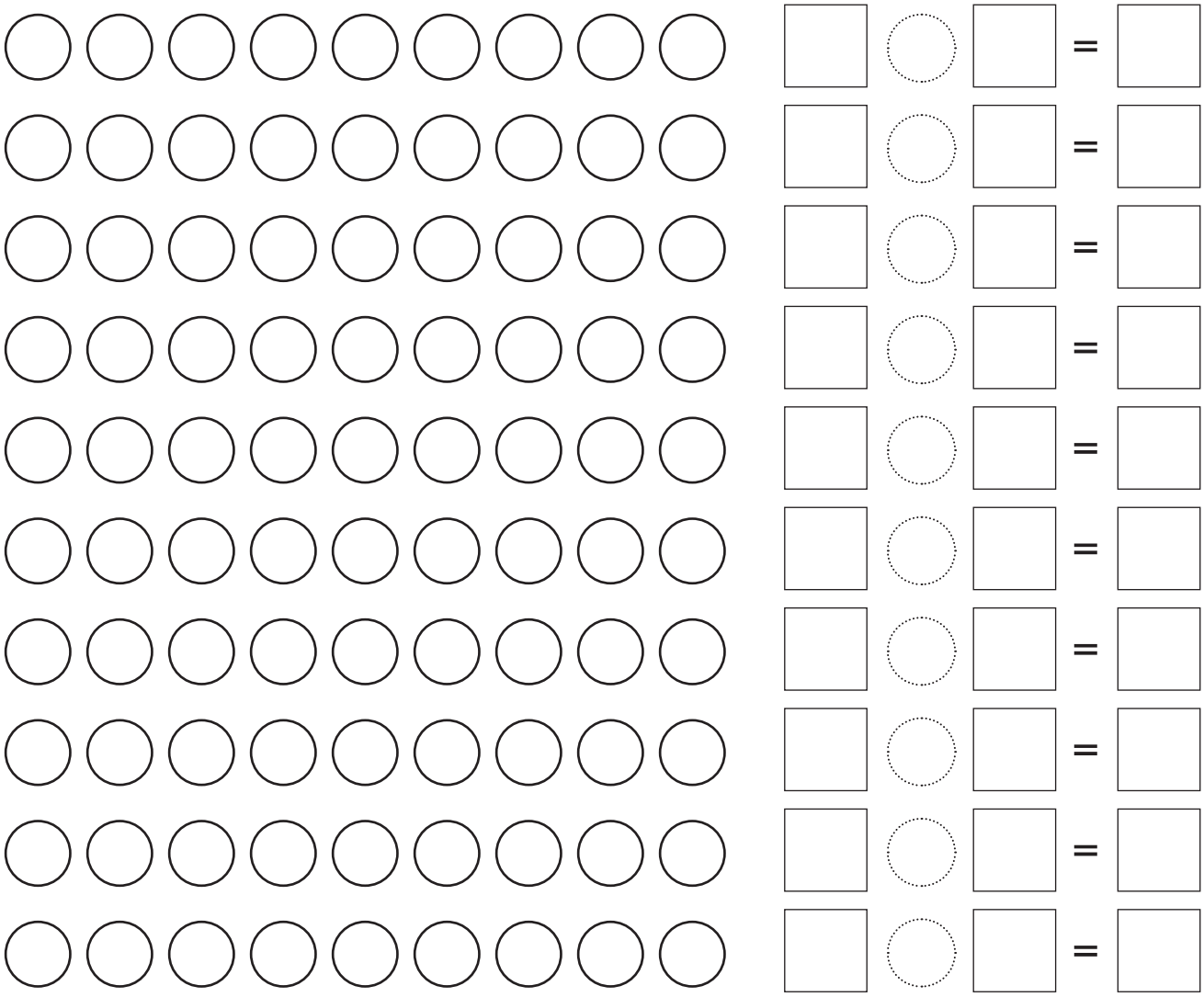
2 Complete these part-whole models.



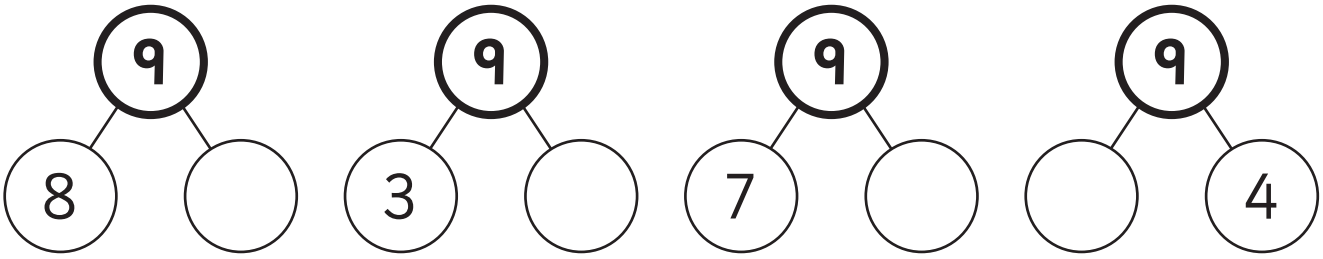
Number bonds up to 10 – 9 (nine)

Number bonds to 9 are all pairs of numbers that add together to make 9. Knowing our number bonds helps us to solve number problems.

1 Colour the counters to make number bonds. Write a number sentence for each row.



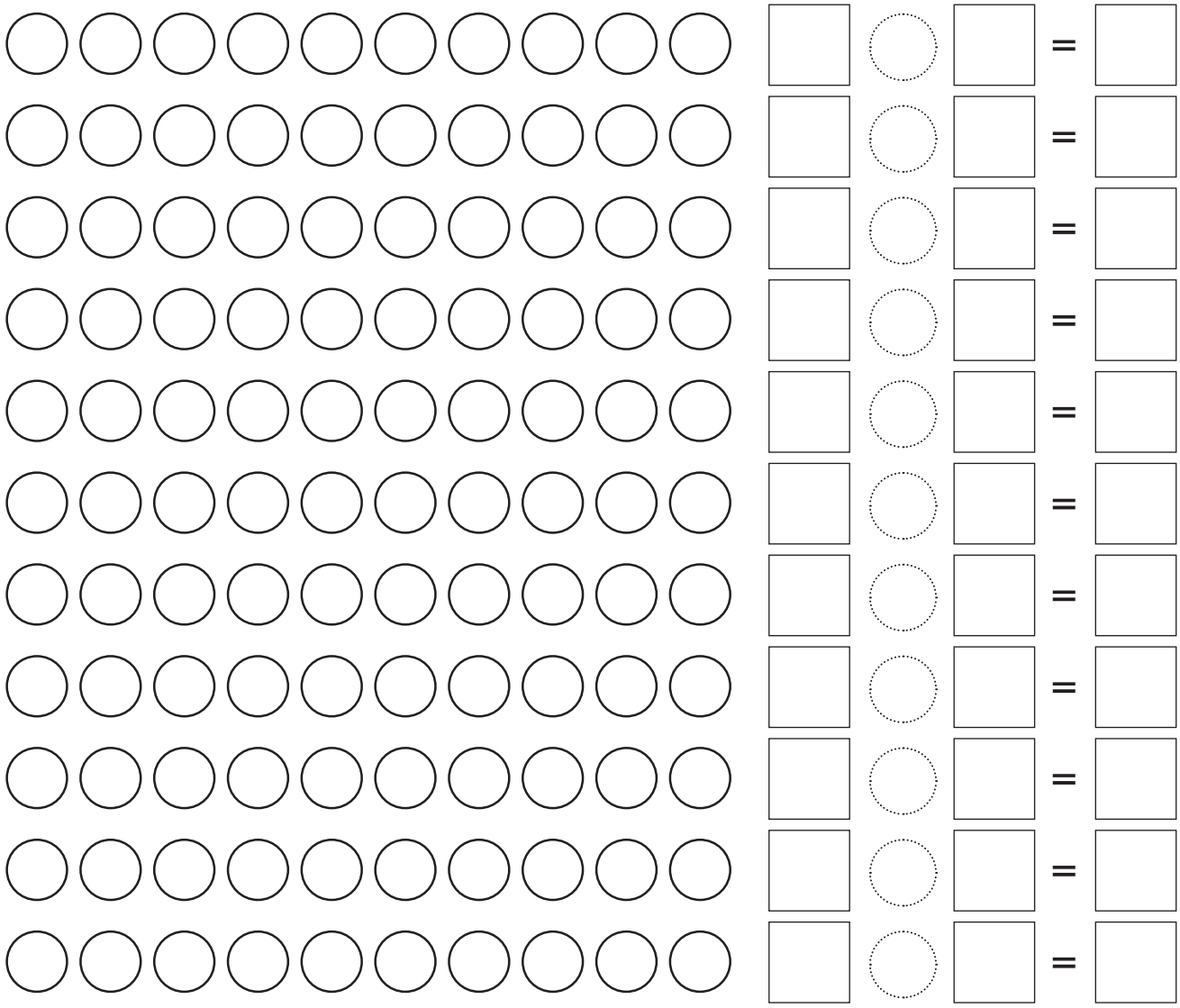
2 Complete these part-whole models



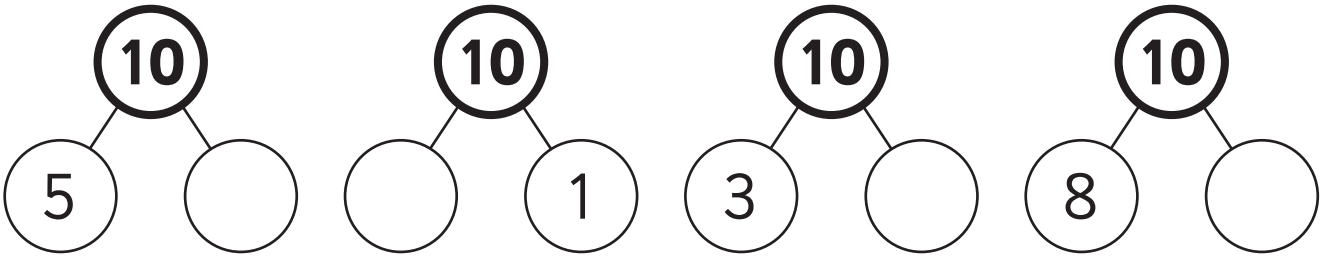
Number bonds up to 10 – 10 (ten)

Number bonds to 10 are all pairs of numbers that add together to make 10. Knowing our number bonds helps us to solve number problems

1 Colour the counters to make number bonds. Write a number sentence for each row.



2 Complete these part-whole models

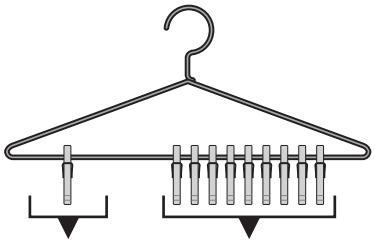


Number bonds up to 10 – 10 (ten)

Number bonds to 10 are all the pairs of numbers that when added together make 10.

There are 10 pegs altogether on the coat hanger.

There is 1 peg on this side.

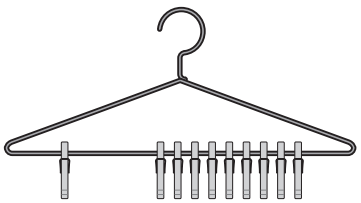


There are 9 pegs on this side.

1 + 9 = 10 ◂ How many pegs are there altogether?

1 Write down one addition and one subtraction sentence for each picture.

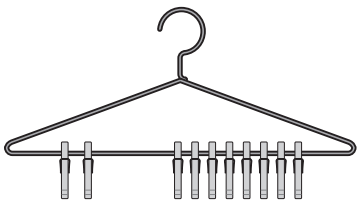
a



□ + □ = □

□ – □ = □

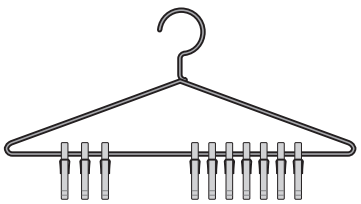
b



□ + □ = □

□ – □ = □

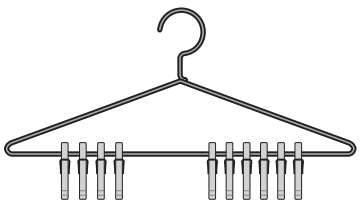
c



□ + □ = □

□ – □ = □

d



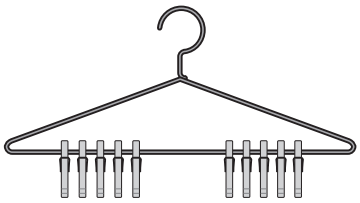
□ + □ = □

□ – □ = □

Number bonds up to 10 – 10 (ten)

1 Write down one addition and one subtraction sentence for each picture.

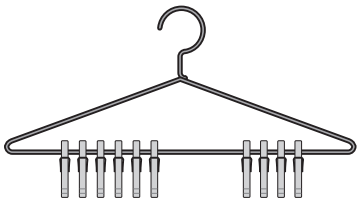
a



□ + □ = □

□ − □ = □

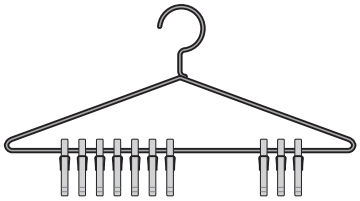
b



□ + □ = □

□ − □ = □

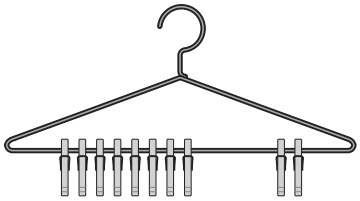
c



□ + □ = □

□ − □ = □

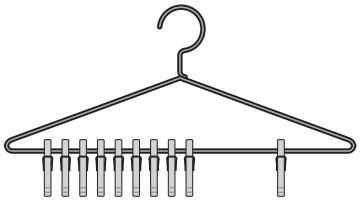
d



□ + □ = □

□ − □ = □

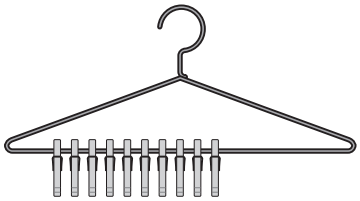
e



9 + □ = □

□ − 9 = □

f



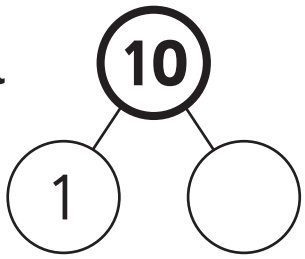
10 + □ = □

□ − □ = □

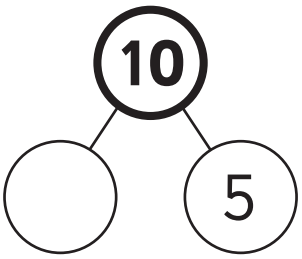
Number bonds up to 10 – 10 (ten)

1 Find the pair to make 10.

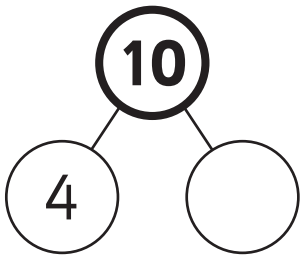
a



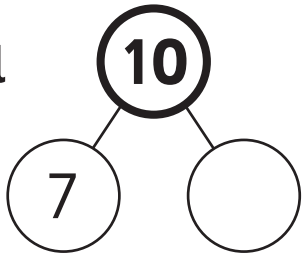
b



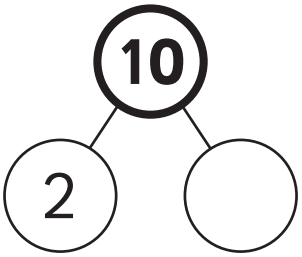
c



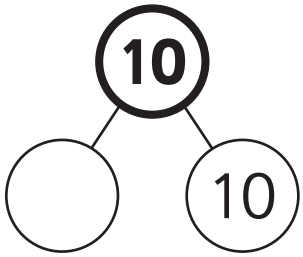
d



e

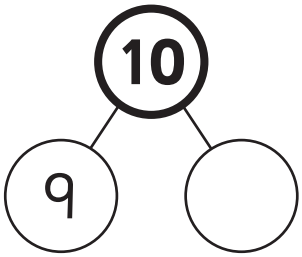


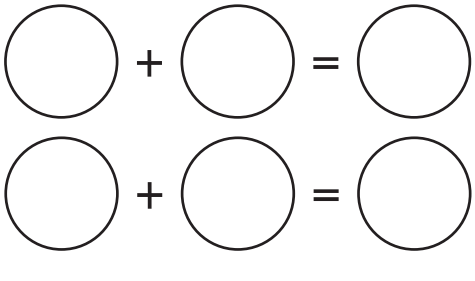
f



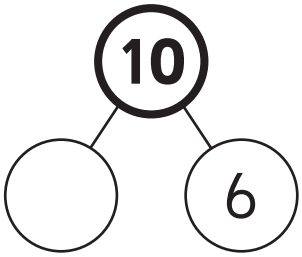
2 Find the missing number to make 10 and write the addition or subtraction sentences for the diagram.

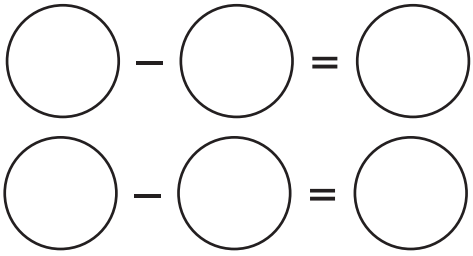
a



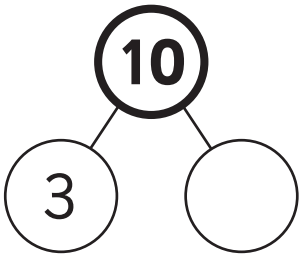


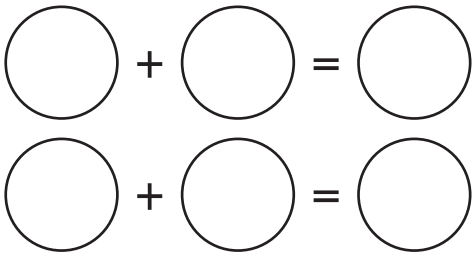
b





c





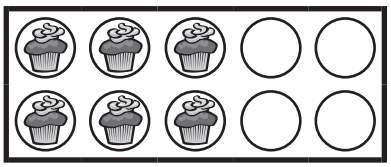
Number bonds up to 10 – 10 (ten)

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

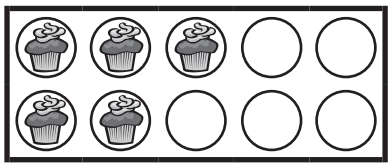
10 – 2 = 8

b



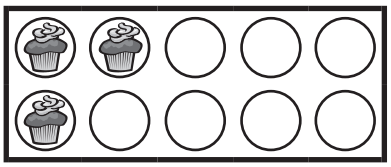
10 – ☐ = ☐

c



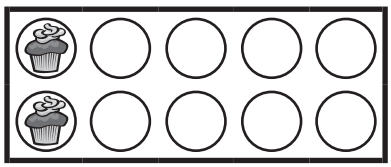
10 – ☐ = ☐

d



10 – ☐ = ☐

e

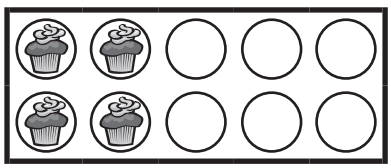


10 – ☐ = ☐

f

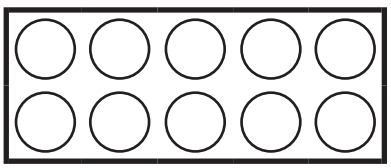
10 – ☐ = ☐

g



10 – ☐ = ☐

h



10 – ☐ = ☐

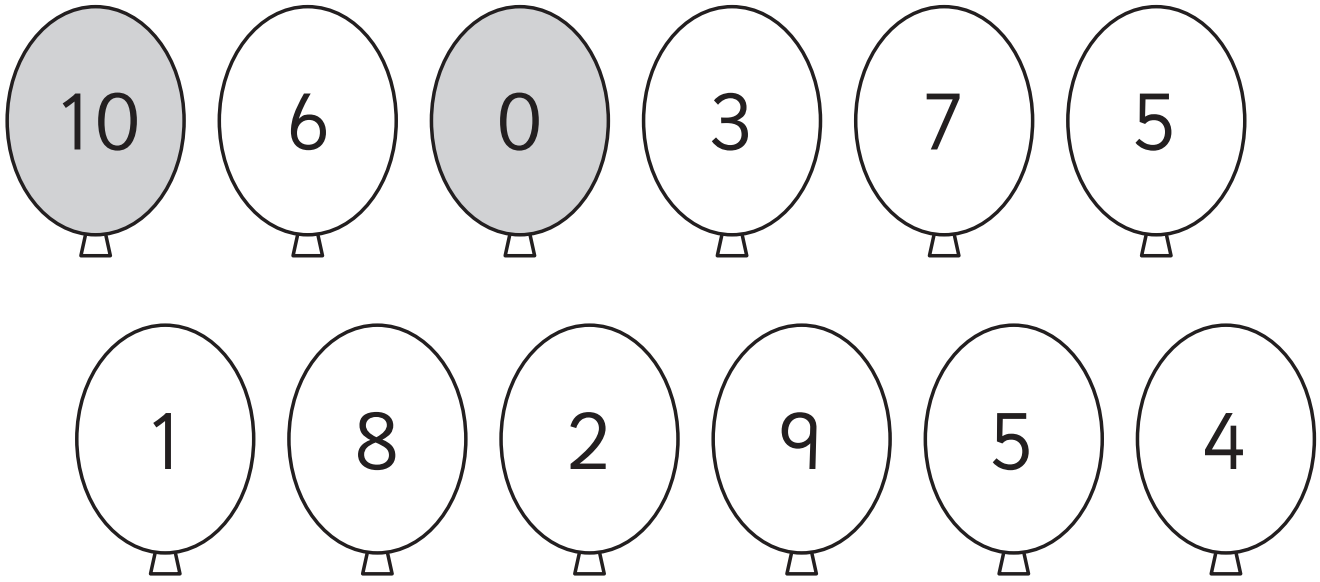
Number bonds up to 10 – 10 (ten)

Knowing the addition facts is really handy. It helps us to solve number problems.

1 Practise your addition combinations to 10.

a 0 + 10 = 10	**b** 1 + ☐ = 10	**c** 2 + ☐ = 10
d 3 + ☐ = 10	**e** 4 + ☐ = 10	**f** 5 + ☐ = 10
g 6 + ☐ = 10	**h** 7 + ☐ = 10	**i** 8 + ☐ = 10
j 9 + ☐ = 10	**k** 10 + ☐ = 10	**l** 4 + ☐ = 8

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



Addition to 10 – counting on

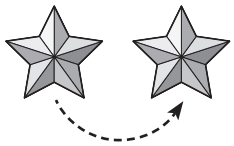
Counting on is one way to solve addition facts.

5 + 1 = ?

5 + 1 = 6

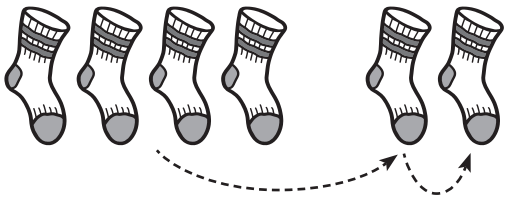
1 Count on and finish the number facts.

a



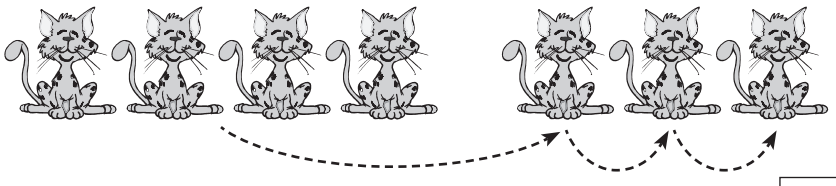
1 + 1 = ☐

b



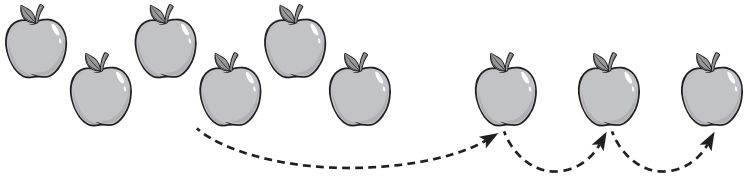
4 + 2 = ☐

c



4 + 3 = ☐

d



6 + ☐ = ☐

Addition to 10 – counting on

We can solve missing number problems by counting on.
Look at this problem.

3 + ? = 7

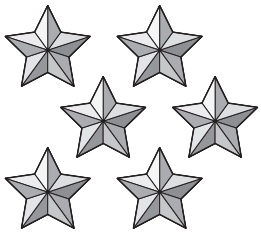
We know that we have 3. We know that we need to get to 7.

So, we start at 3 and count on until we get to 7.

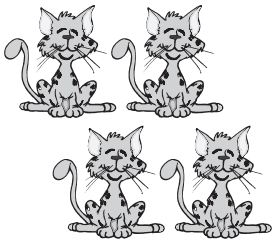
We added 4 more to get to 7.

So, **3 + 4 = 7**

1 Count on and finish the number facts.

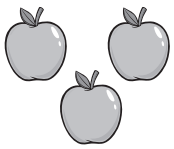


a 6 + ☐ = 10



b 4 + ☐ = 8

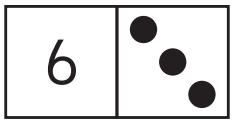
c 8 + ☐ = 9



d ☐ + 3 = 9

Addition to 10 – counting on

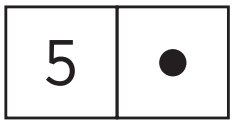
Let's add by counting on.



6 + 3 = 9

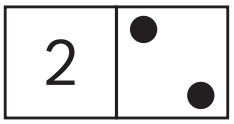
1 Count on. Write the number fact.

a



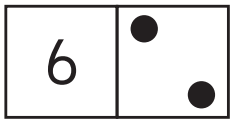
5 + 1 = ☐

b



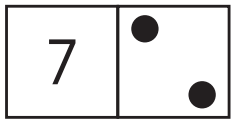
2 + ☐ = ☐

c



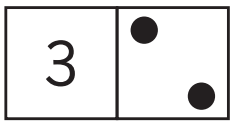
6 + ☐ = ☐

d



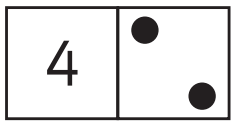
7 + ☐ = ☐

e



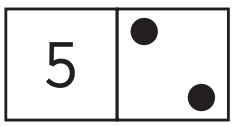
☐ + ☐ = ☐

f



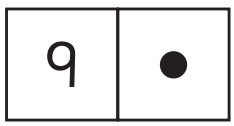
☐ + ☐ = ☐

g



☐ + ☐ = ☐

h



☐ + ☐ = ☐

Addition to 10 – counting on

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

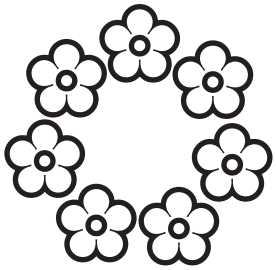
a 3 + **1** = ☐

b 4 + **2** = ☐

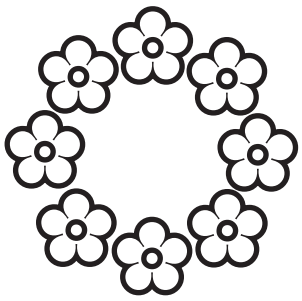
c 2 + **3** = ☐

d 3 + **3** = ☐

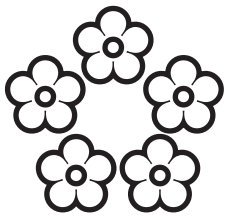
2 Draw the flowers and finish the facts.



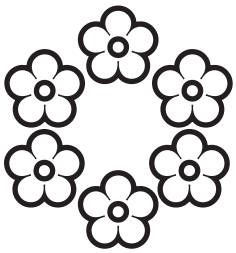
a 7 + **2** = ☐



b 8 + **2** = ☐



c 5 + **3** = ☐



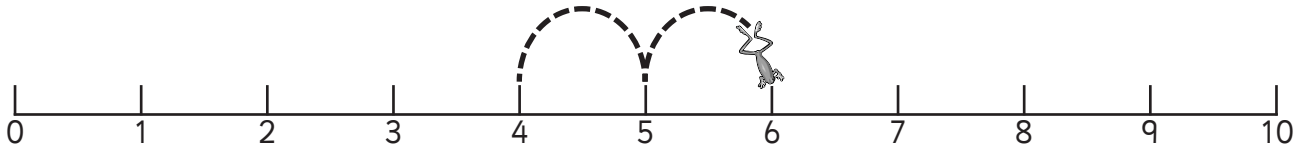
d 6 + **2** = ☐

Addition to 10 – using number lines

Number lines are handy tools to use when adding.

Look at **4 + 2 =** **?**

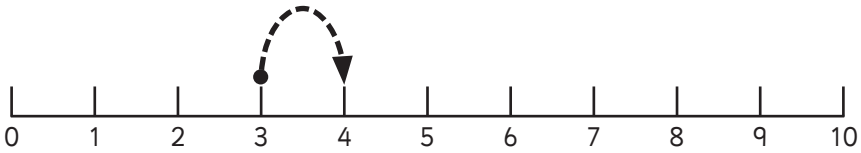
We start at 4 and hop 2 spaces.



4 + 2 = 6

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

a 3 + 1 = ☐

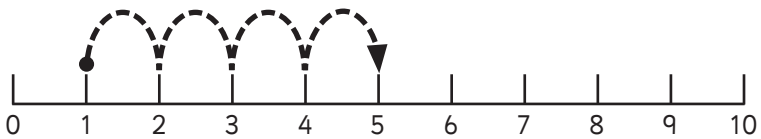


b 4 + 4 = ☐

c 2 + 3 = ☐

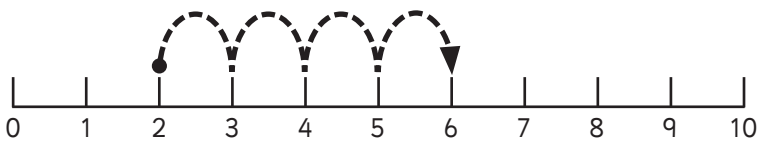
2 The hops are on the line. Write the number fact to match.

a



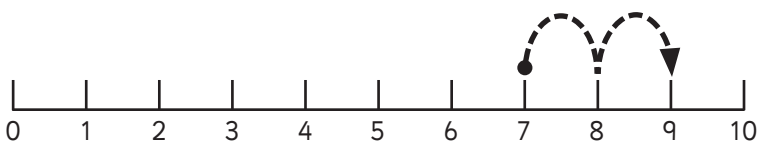
1 + ☐ = ☐

b



2 + ☐ = ☐

c

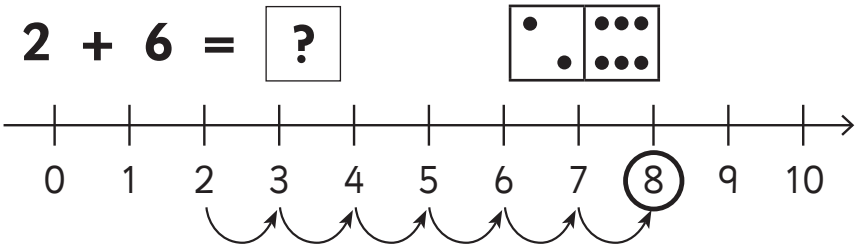


7 + ☐ = ☐

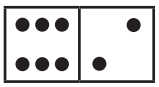
Addition to 10 – turnarounds

Turnarounds make solving addition problems easier.

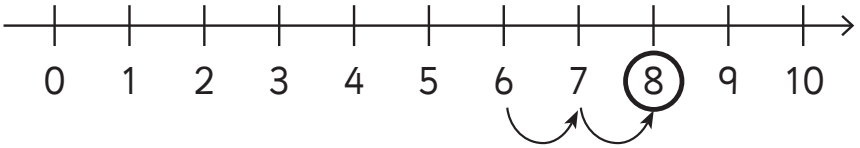
2 + 6 = ?



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

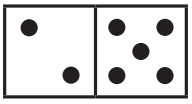


6 + 2 = 8 This is the same as **2 + 6 = 8**



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

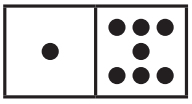
a



2 + 5 = ☐

☐ + ☐ = ☐

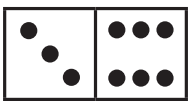
b



1 + 7 = ☐

☐ + ☐ = ☐

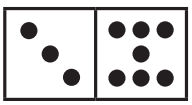
c



3 + 6 = ☐

☐ + ☐ = ☐

d



3 + 7 = ☐

☐ + ☐ = ☐

Use the line to help you.

Addition to 10 – adding using number bonds

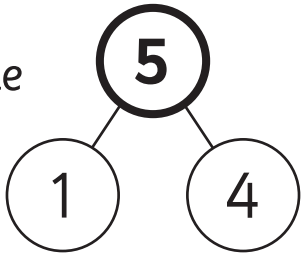
Now that we've learnt our number bonds up to 10, we can use them to solve number problems.

Look at this problem.

How many animals are there altogether?

1 + 4 = 5

We can use a part-whole model to show this.

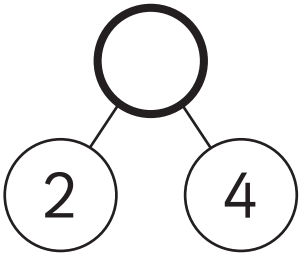


1 Fill in the missing numbers.

a


\+ = □

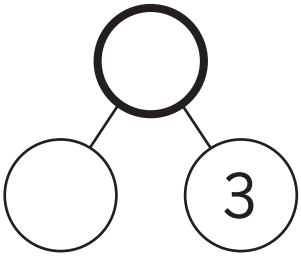
2 + 4 = □



b


\+ = □

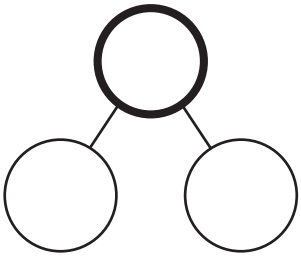
□ + 3 = □



c


\+ = □

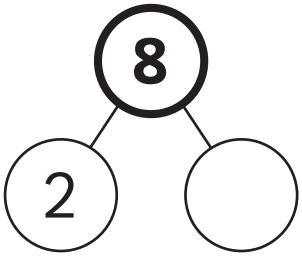
□ + □ = □



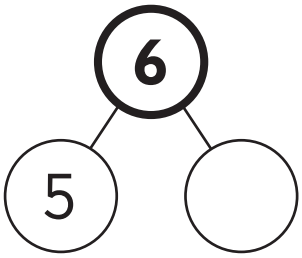
Addition to 10 – adding using number bonds

1 Complete the number sentences.

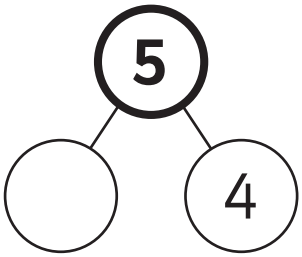
a 2 + ☐ = 8



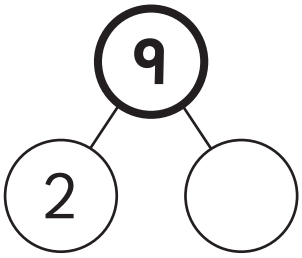
b 5 + ☐ = 6



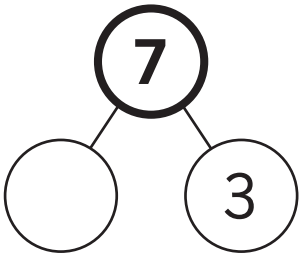
c ☐ + 4 = 5



d 2 + ☐ = 9



e ☐ + 3 = 7



2 If you know that 7 and 3 is 10, how could you work out what 8 + 3 is?

Addition to 10 – word problems

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

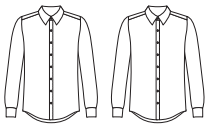
how many altogether?

2 Write the missing numbers.

a There are 3 stripy socks. There are 4 spotty socks.

3 + 4 = ☐

There are ____ socks altogether.



b There are 5 black shirts. There are ____ white shirts.

5 + ☐ = ☐

There are ____ shirts altogether.

Addition to 10 – word problems

1 Draw the objects and write the missing numbers.

a Draw 4 more flowers.

1 + ☐ = ☐

There are ____ flowers altogether.

b Draw 4 more strawberries in the bowl.

☐ + ☐ = ☐

There are ____ strawberries in total.

c Draw 6 more stars.

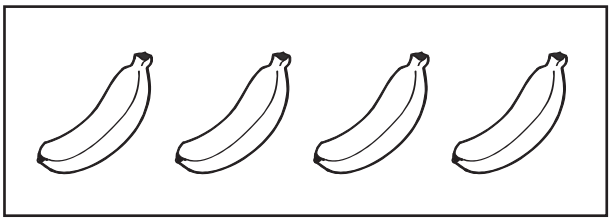
☐ + ☐ = ☐

There are ____ stars altogether.

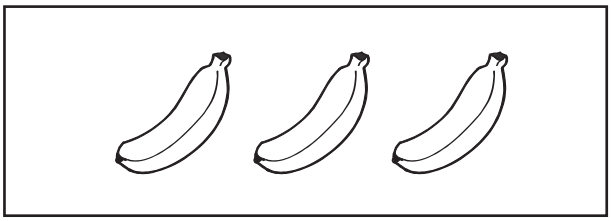
Addition to 10 – word problems

1 Draw pictures and then write the fact.

a Millie Monkey has 4 bananas.



Mikey Monkey has 3 bananas.



How many do they have altogether?

☐ + ☐ = ☐

b Bert Bear has 5 fish.

Betty Bear has 3 fish.

How many fish do they have altogether?

☐ + ☐ = ☐

c Scottie Dog has eaten 7 sausages.

Cuddly Pup has eaten 3 sausages.

How many sausages have they eaten?

☐ + ☐ = ☐

Addition to 10 – word 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?

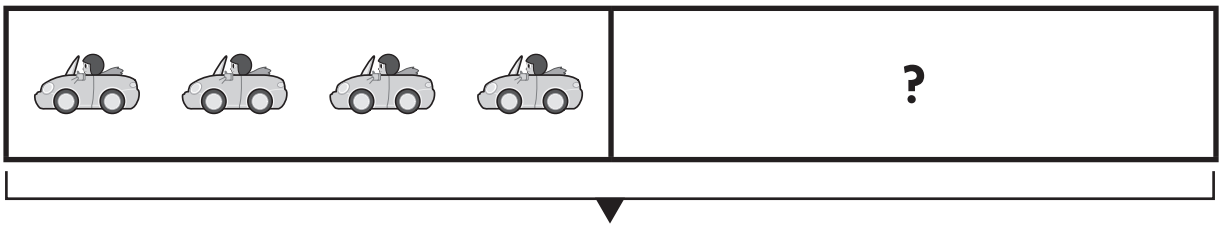
We know he had 4 cars.

We know he ends up with 7 cars.

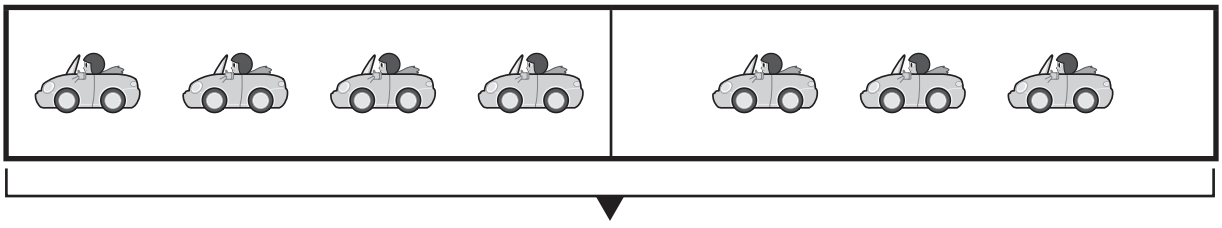
What we don't know is how many cars his gran gave him.

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

We draw 4 cars. Then we draw some more cars to get to 7.



We need to draw 3 more cars.



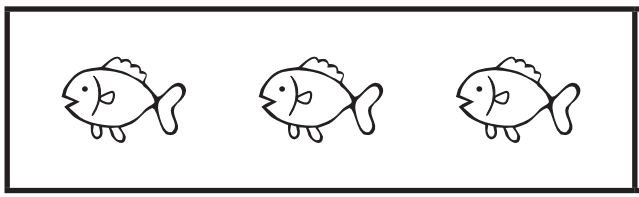
4 + 3 = 7

Addition to 10 – word problems

1 Draw and finish the fact.

a Zoe had 3 fish. She bought some more and now has 5 fish.

How many did she buy?



3 + ☐ = 5 She bought ____ more fish.

b 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 more cakes did she eat during the party?

3 + ☐ = 9 She ate ____ more cakes during the party.

c Aman had some toy dinosaurs. His dad bought him 5 more. Now he has 10 dinosaurs.

How many dinosaurs did he have to begin with?

☐ + 5 = 10 He had ____ dinosaurs to begin with.

Addition to 20 – my addition chart

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

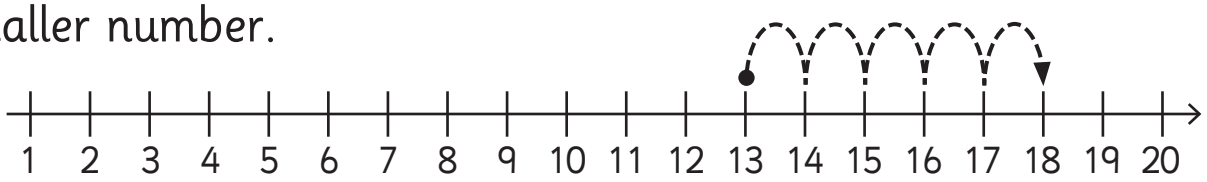
Colour each square as you master the fact!

+	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 to 20 – counting on

Read the addition sentence: **13 + 5 =** **?**

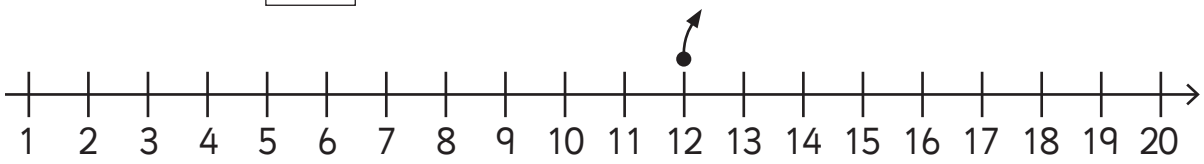
Start by finding the largest number and count on the smaller number.



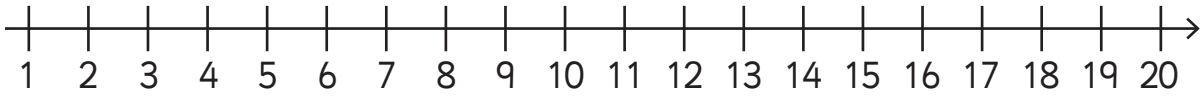
The number you land on is the answer, so **13 + 5 = 18**

1 Count on using the number line. Complete the number sentences.

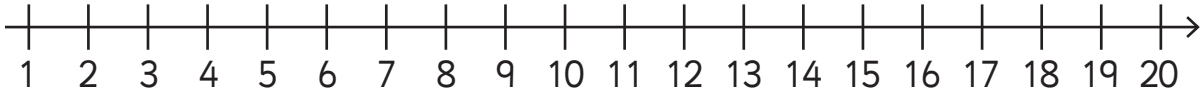
a 12 + 3 = ☐



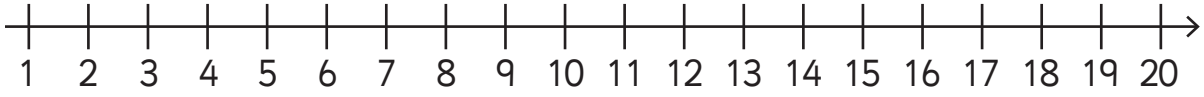
b 14 + 5 = ☐



c 9 + 7 = ☐



d 11 + 8 = ☐



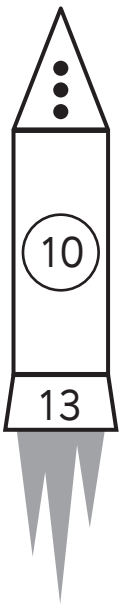
Remember we count the **jumps or spaces**, not the numbers!

Addition to 20 – counting on

You will need: a partner, scissors, craft paper, a copy of this page and page 30

copy

What to do:



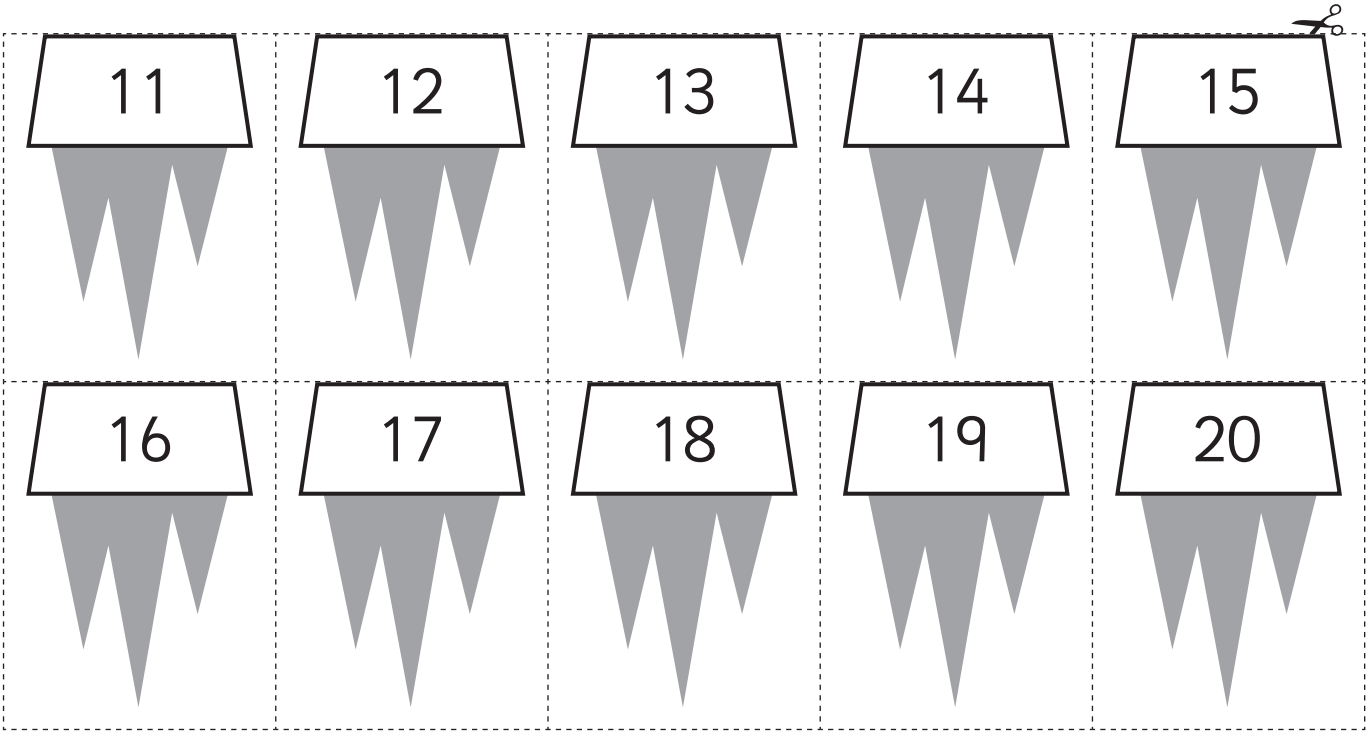
Cut out the rocket parts and spread them out.

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

This rocket is ready for blast-off because 10 + ⋮ = 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 to 20 – counting on

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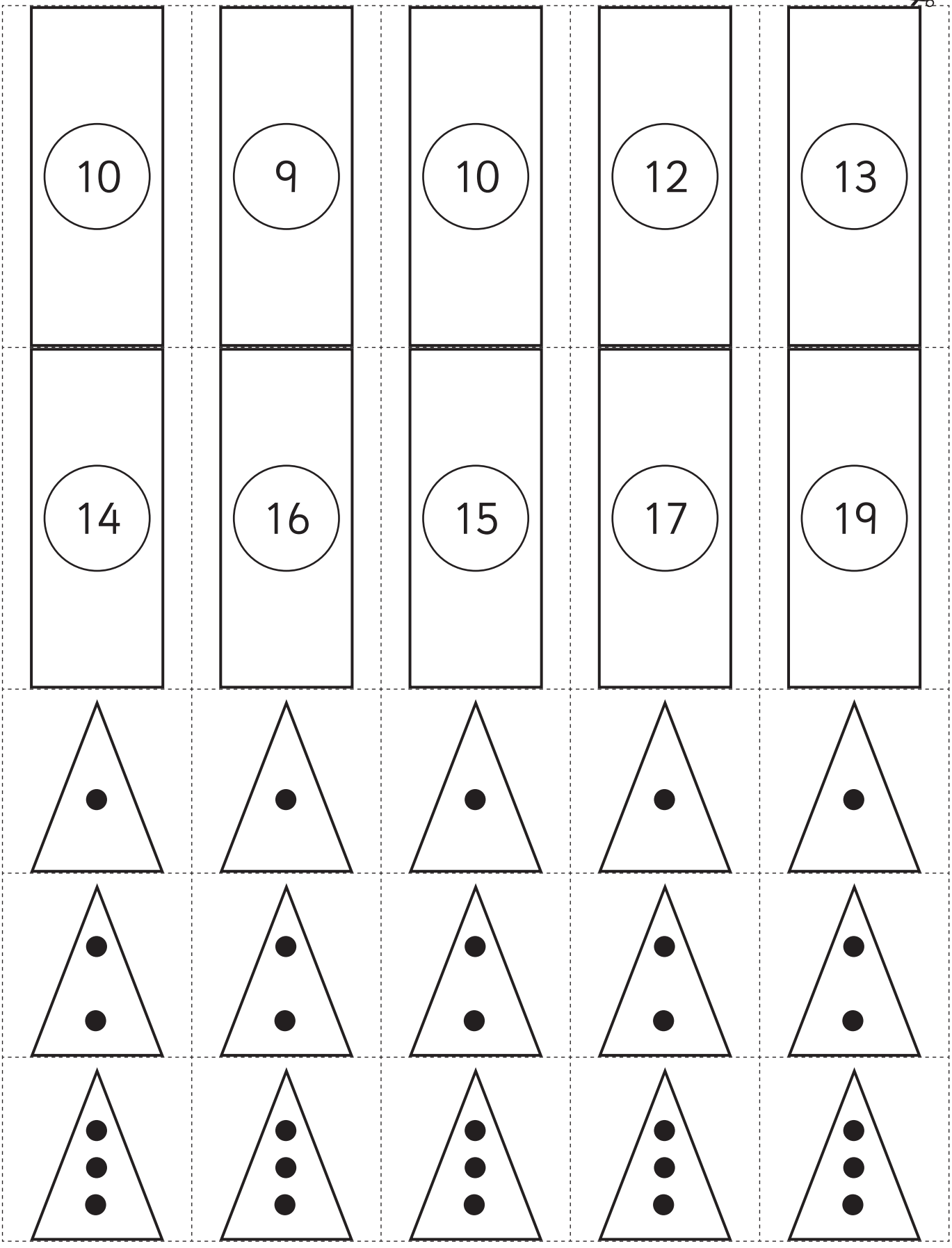
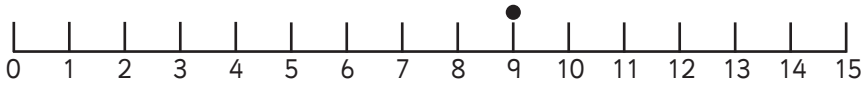


Addition to 20 – counting on

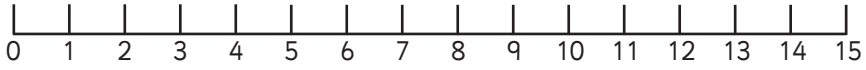
1 Hop along the number line and finish the number fact.

a 9 + 2 = ☐

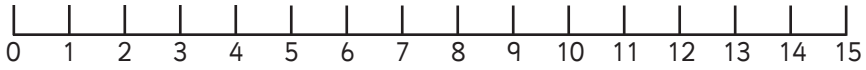


b 8 + 5 = ☐

c 7 + 7 = ☐

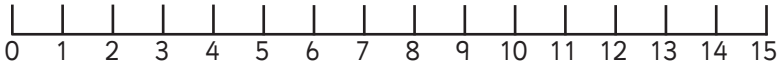


d 11 + 2 = ☐



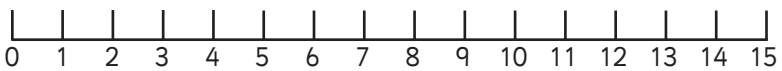
2 Show the story on the number line and as a fact.

a Tahlia had **8** stickers. Her friend gave her **4** more. How many stickers does she have now?



☐ + ☐ = ☐

b Mohammed kicked **7** goals on Tuesday and **6** goals on Wednesday. How many goals did he kick altogether?

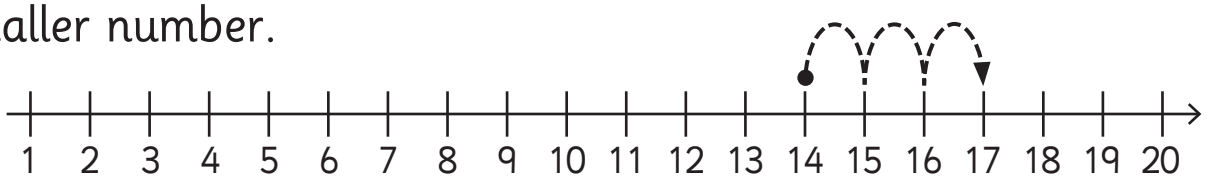


☐ + ☐ = ☐

Addition to 20 – counting on

Read the addition sentence: **3 + 14 = ?**

Start by finding the largest number and count on the smaller number.

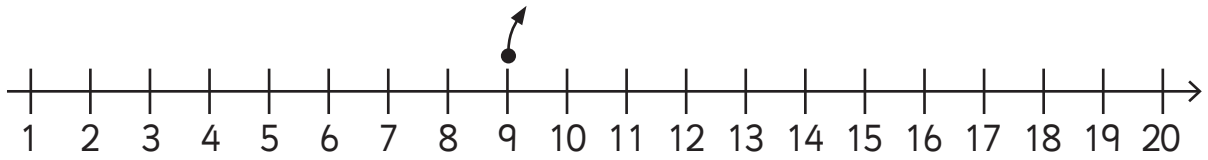


The number you land on is the answer, so

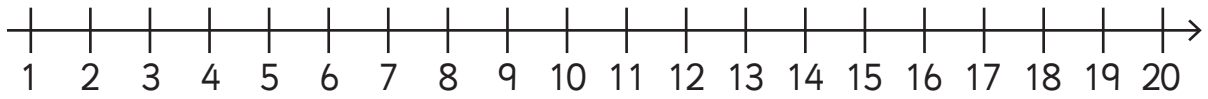
3 + 14 = 14 + 3 = 17

1 Count on using the number line. Complete the number sentences.

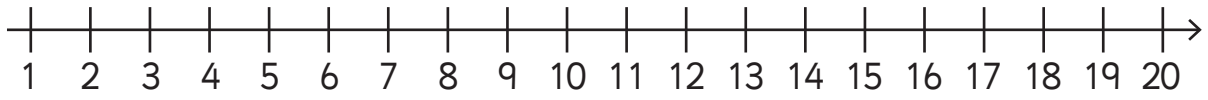
a 9 + 4 = ☐



b 2 + 17 = ☐



c 10 + 8 = ☐



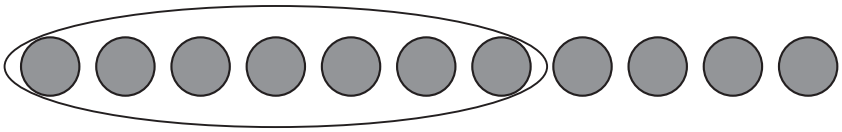
Remember to start with the biggest numbers!

Addition to 20 – missing number problems

Look at this problem. **7 + ? = 11**

We can use counters to help solve this.

We know that we want to make 11 counters so let's take 11 counters. We already have 7 so let's circle those.



4 more counters make 11 counters. So, **7 + 4 = 11**

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

a 2 + ☐ = 11

b 3 + ☐ = 14

c ☐ + 8 = 17

d 13 + ☐ = 18

e 3 + ☐ = 12

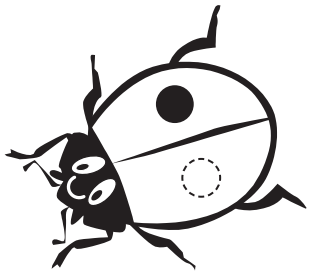
f ☐ + 4 = 16

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

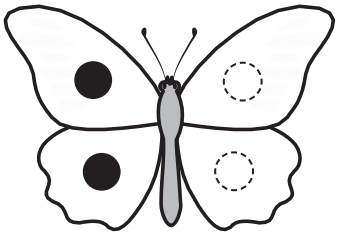
13 + 1 = 14

Addition to 20 – doubles

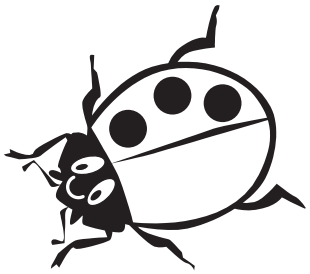
1 Draw the same number of spots on the empty side. Write the number fact to match.



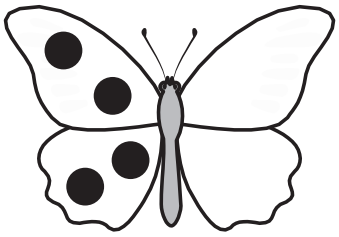
a 1 + 1 = ☐



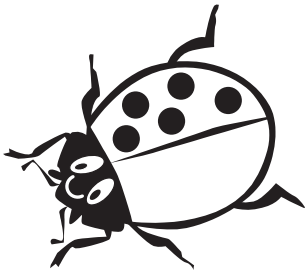
b ☐ + ☐ = ☐



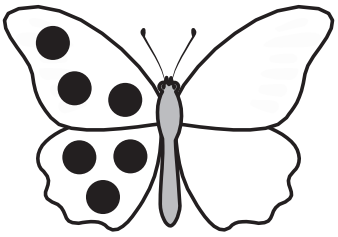
c ☐ + ☐ = ☐



d ☐ + ☐ = ☐



e ☐ + ☐ = ☐

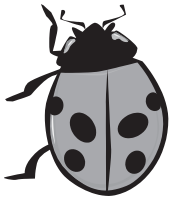


f ☐ + ☐ = ☐

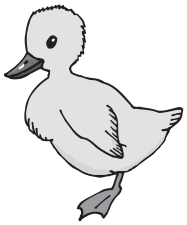
2 Draw the missing legs. Write the number fact to match.

a ☐ + ☐ = ☐

b ☐ + ☐ = ☐

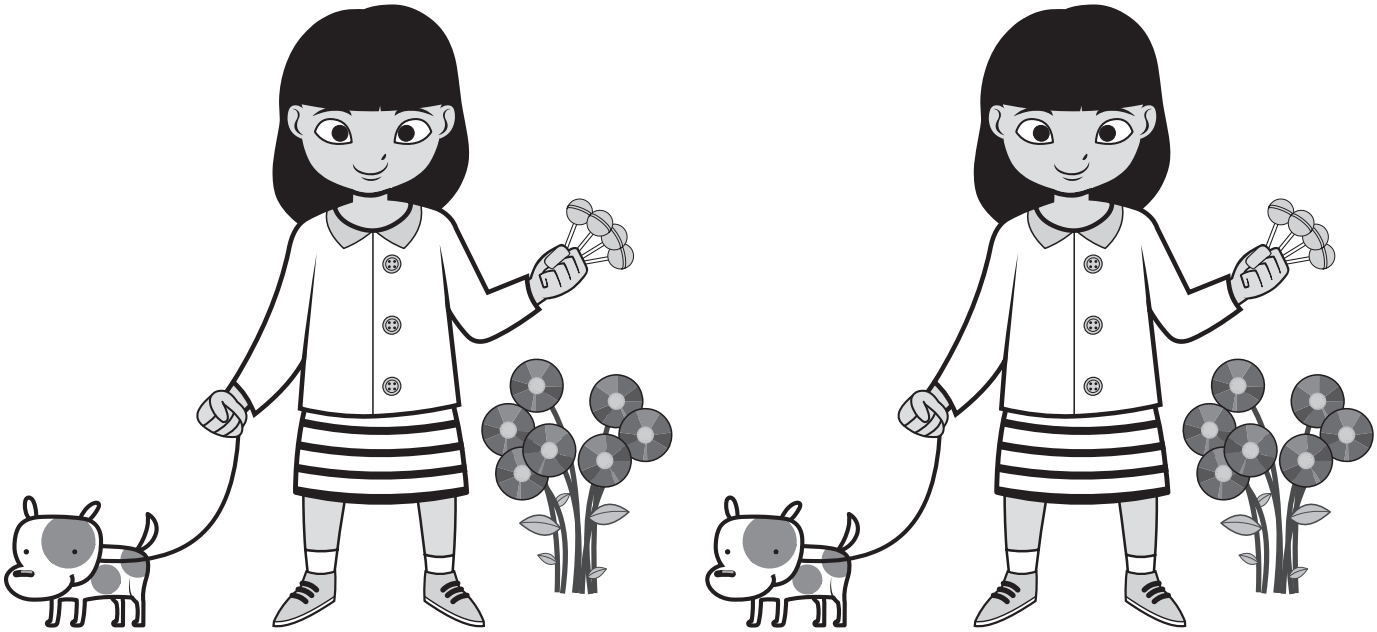


c ☐ + ☐ = ☐



d ☐ + ☐ = ☐

Addition to 20 – doubles



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

$2 + 2 = 4$

$7 + 7 = 14$

Can you find any more? Write them.

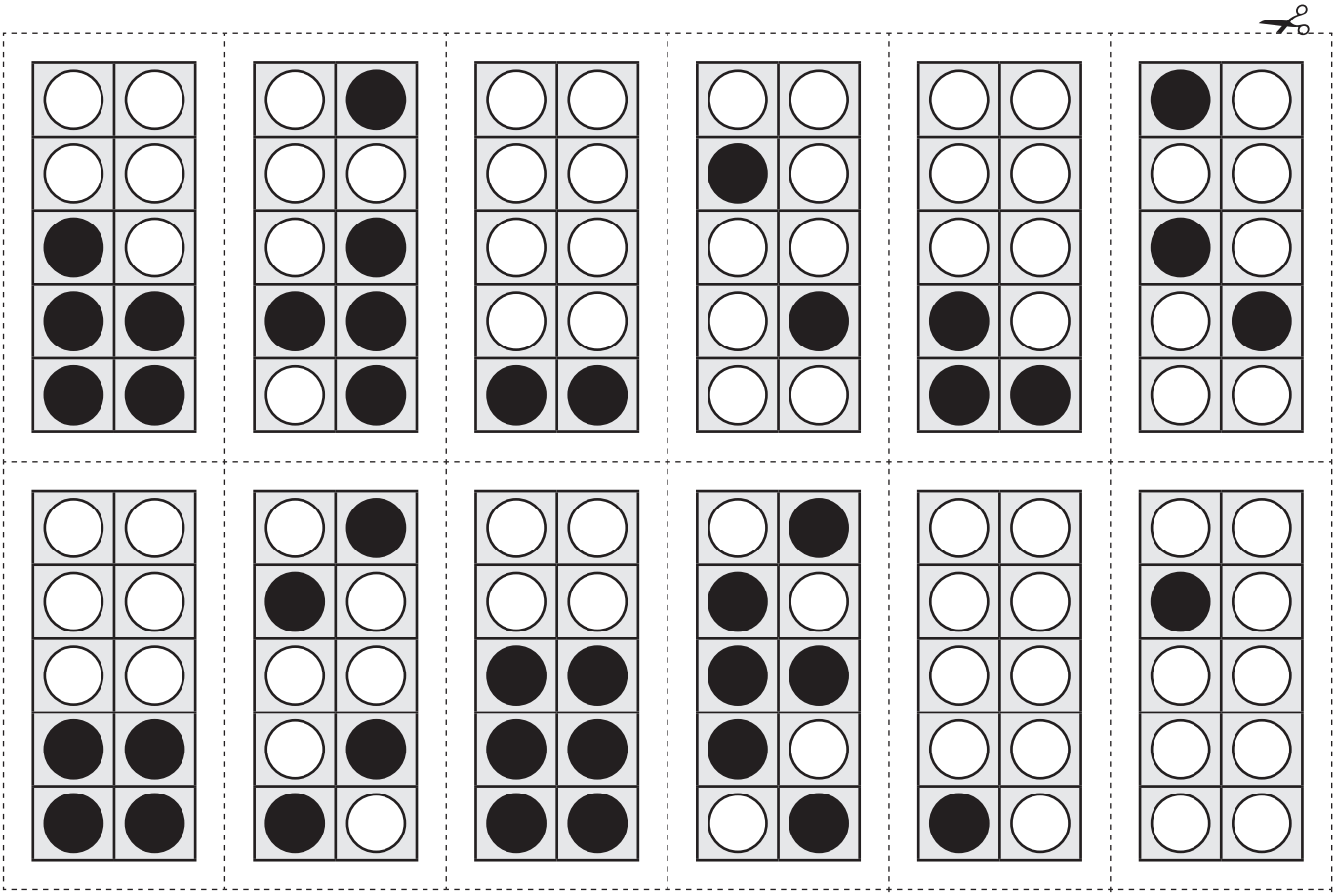
Addition to 20 – doubles

You will need: a partner scissors

C 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.



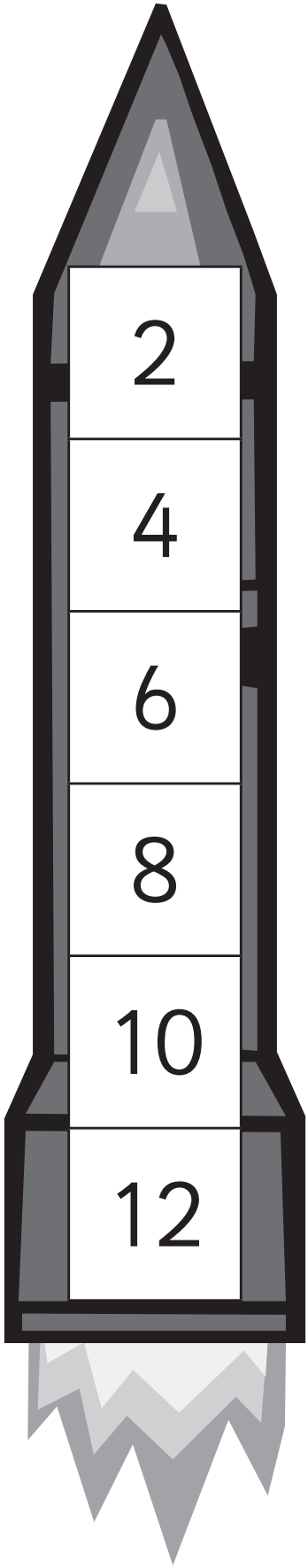
What to do next:

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 to 20 – 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!

What to do next:

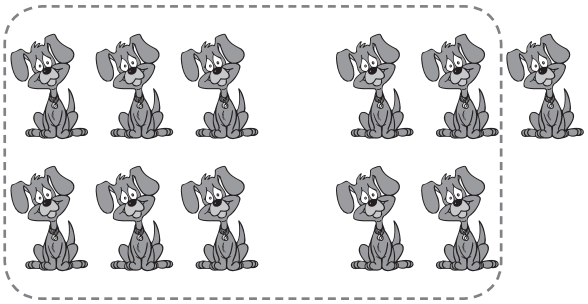
Roll 2 dice and add the dots. Work out what the **double of the total will be**. You can use counters to help.

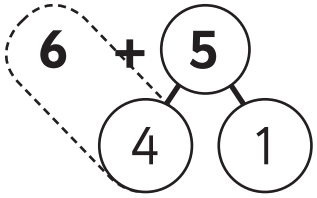
Record the number facts you make.

Addition to 20 – making 10

The make 10 strategy can help us to solve number problems.

Look at **6 + 5 = ?**





6 + 4 = 10

10 + 1 = 11

Make 10 and then add the rest.

10 + 1 = 11

1 Finish the facts.

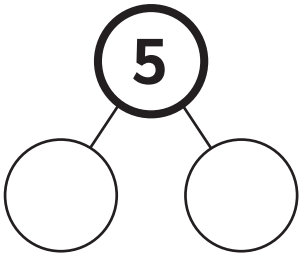
a 10 + 3 = ☐ **b** 10 + 4 = ☐ **c** 10 + 2 = ☐

d 10 + 9 = ☐ **e** 10 + 1 = ☐ **f** 10 + 8 = ☐

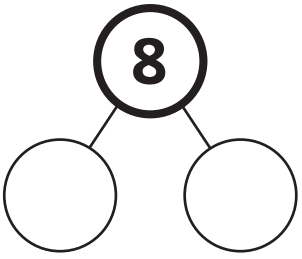
g 10 + 7 = ☐ **h** 10 + 6 = ☐ **i** 10 + 5 = ☐

2 Complete the number bonds.

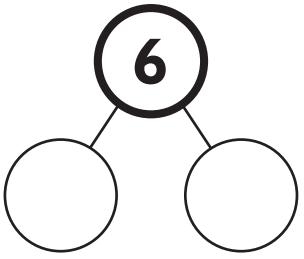
a



b



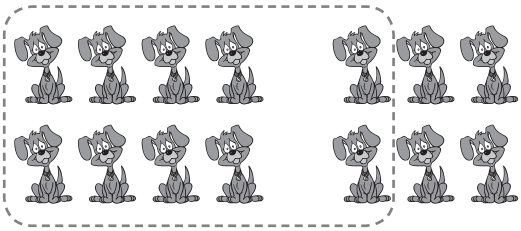
c

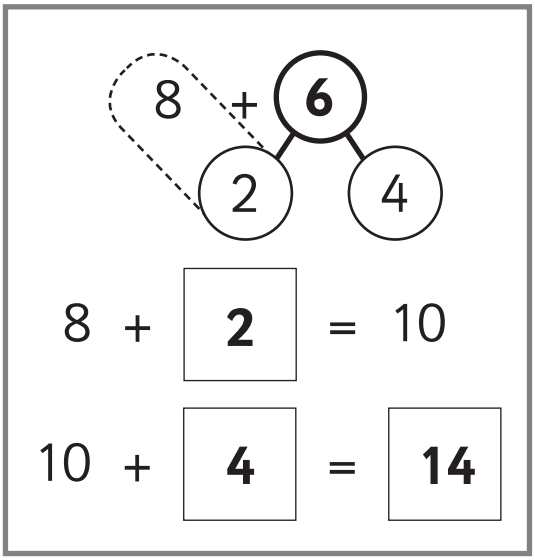


Addition to 20 – making 10

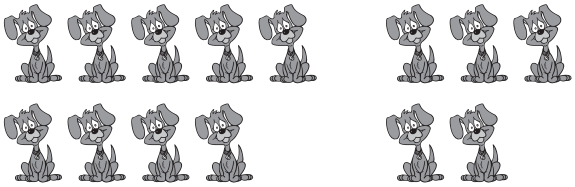
1 Make 10 to solve these problems then fill in the part-whole model.

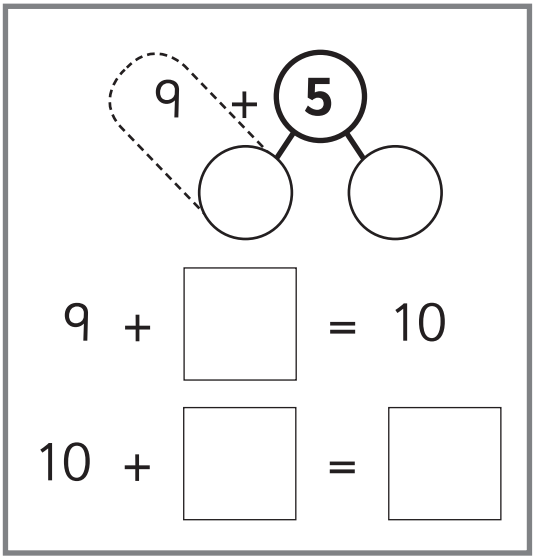
a 8 + 6 = ☐



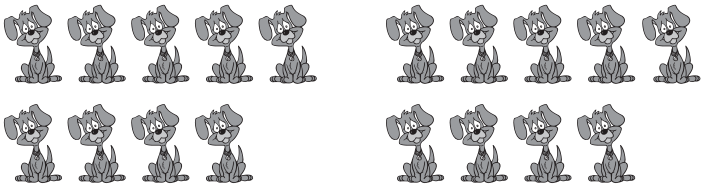


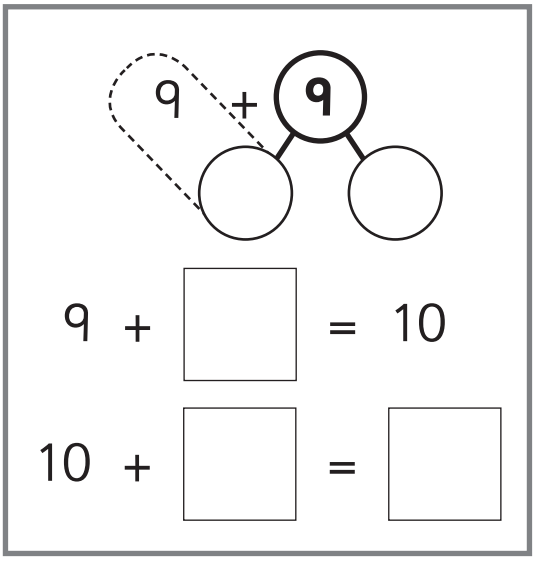
b 9 + 5 = ☐





c 9 + 9 = ☐



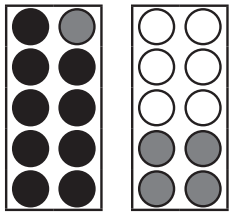


Addition to 20 – making 10

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**.

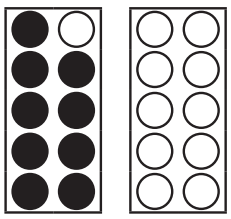
We need to add 4 more into the other frame.

Now we have 14.

9 + 5 = 14

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

a Colour 3 more

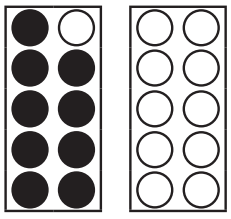


9 + 3 = ☐

in one frame

in the other

b Colour 4 more

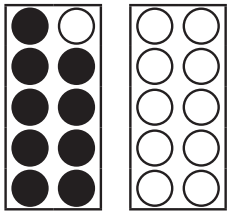


9 + 4 = ☐

☐ in one frame

☐ in the other

c Colour 6 more



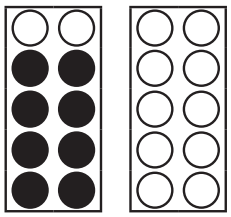
9 + 6 = ☐

☐ in one frame

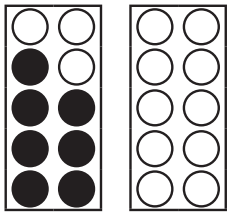
☐ in the other

Addition to 20 – making 10

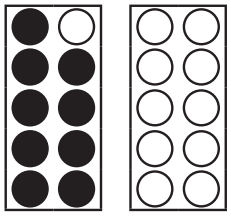
1 Colour more counters to solve these.

a 

8 + 5 = ☐ ☐ in one frame ☐ in the other

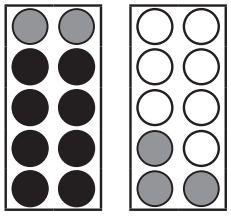
b 

7 + 6 = ☐ ☐ in one frame ☐ in the other

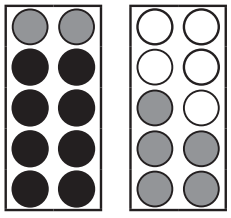
c 

9 + 4 = ☐ ☐ in one frame ☐ in the other

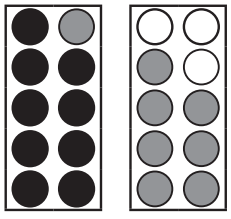
2 Write the addition facts to match the tens frames.

a 

☐ + ☐ = ☐

b 

☐ + ☐ = ☐

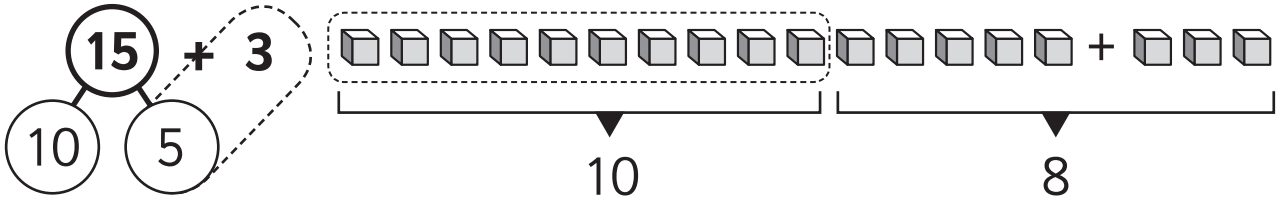
c 

☐ + ☐ = ☐

Addition to 20 – adding teen numbers

When we add ones it can be helpful to split the teen number into tens and ones.

Look at **15 + 3 = ?**



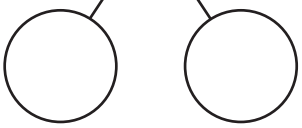
5 + 3 = 8

10 + 8 = 18

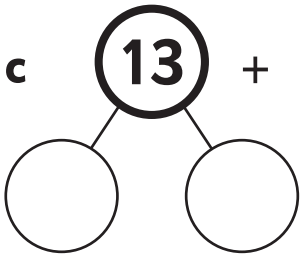
1 Finish the fact. Use cubes to help.

a **15** + 4 = ☐

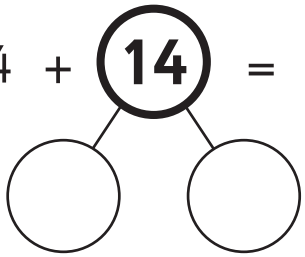
b 6 + **11** = ☐



c **13** + 6 = ☐



d 4 + **14** = ☐



2 Solve.

a 12 + 7 = ☐

b 11 + 5 = ☐

c 13 + 4 = ☐

d 14 + 2 = ☐

Addition to 20 – game

You will need:  a partner  2 counters  1 die

What to do:

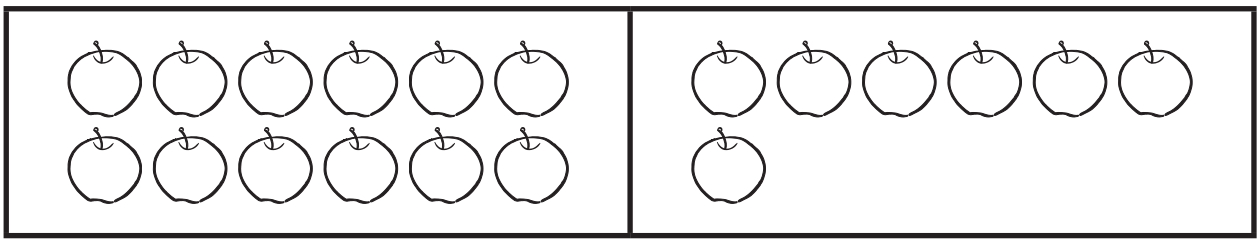
Place both counters on the number 1. Player 1 rolls the dice and adds the number rolled to the number the number their counter is on. Take turns. The winner is the first player to reach 20. You must roll the correct number to land on 20.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

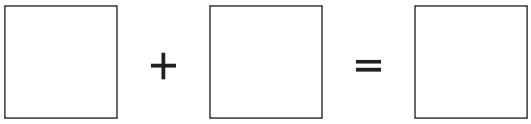
Addition to 20 – word problems

1 Draw pictures and then write the fact.

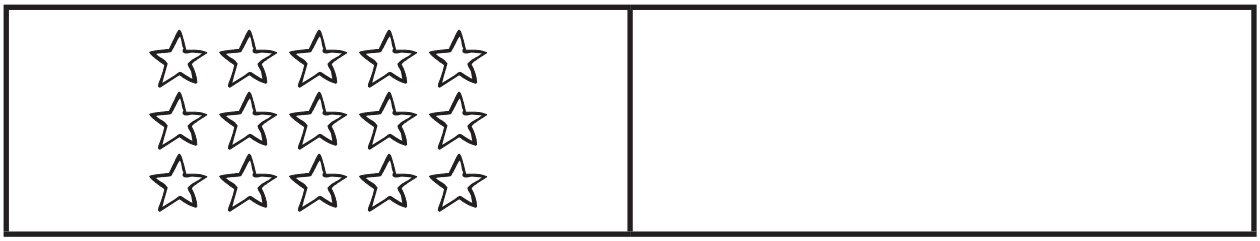
a Tom Thumb has 12 apples. Lucy Locket has 7 apples.



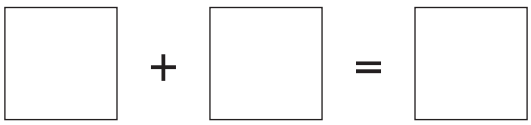
How many do they have altogether?



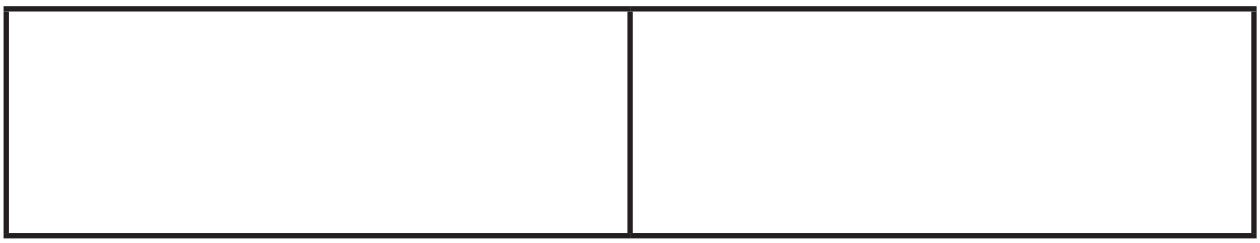
b Pink Penelope has 15 stars. Blue Bertie has 4 stars.



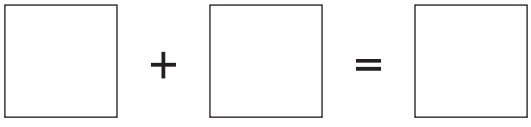
How many stars do they have altogether?



c Hungry Harry has eaten 7 donuts. Little Lila has eaten 9 donuts.



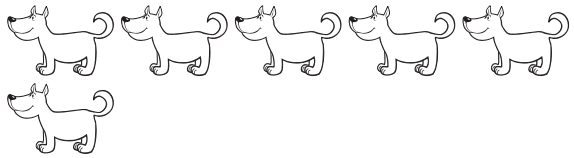
How many donuts have they eaten altogether?



Addition to 20 – word problems

1 Draw pictures and finish the fact.

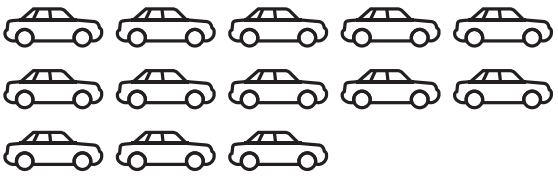
a Peter's Pet Shop has 6 puppies. They buy some more. Now they have 14 puppies. How many more did Peter buy?



6 + ☐ = 14

He bought _____ more puppies.

b Tara had 13 toy cars. She was given some more for her birthday. Now she has 17. How many was she given



13 + ☐ = ☐

She was given _____ more car.

c Class 1F had 8 apples. Their teacher bought some more. Now they have 17 apples. How many more apples did their teacher buy?

☐ + ☐ = ☐

Their teacher bought _____ more.

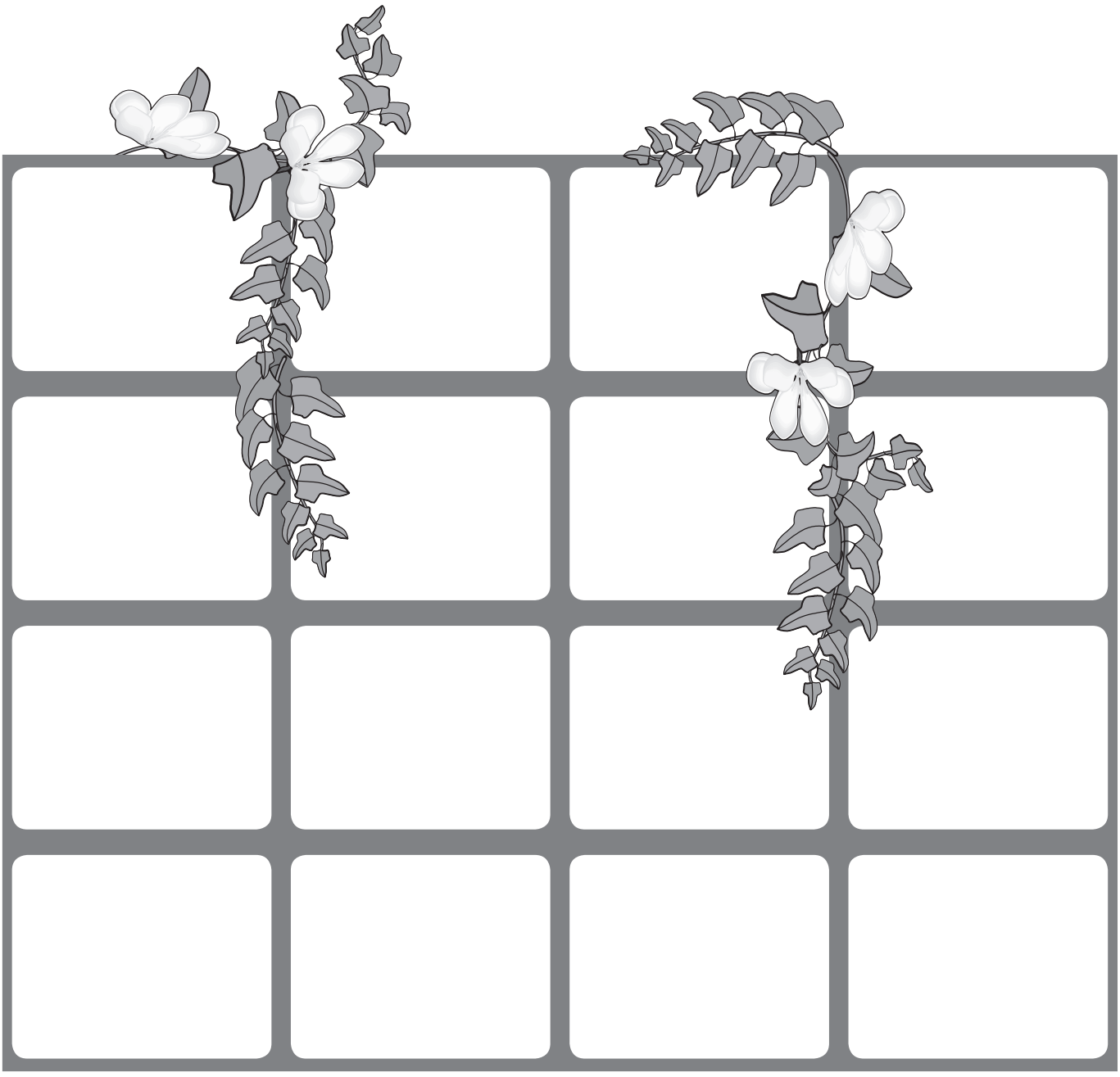
Addition to 20 – turnarounds

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.



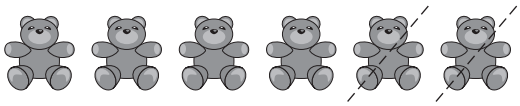
Subtracting within 10 – crossing out

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

6 – 2 = 4

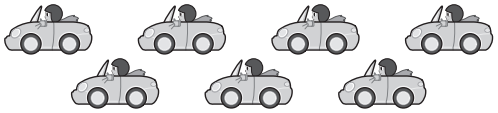
1 Cross out the pictures to match these number facts.

a



6 – 2 = 4

b



7 – 6 = 1

c

4 – 2 = 2

d

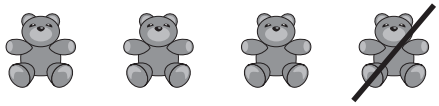
9 – 3 = 6

2 Show these picture stories as number facts.

a

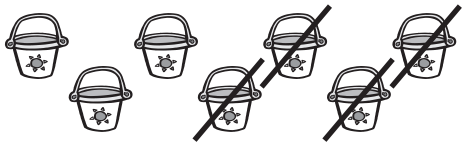
□ – □ = □

b



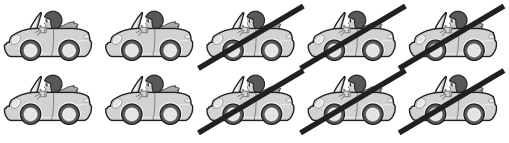
□ – □ = □

c



□ – □ = □

d

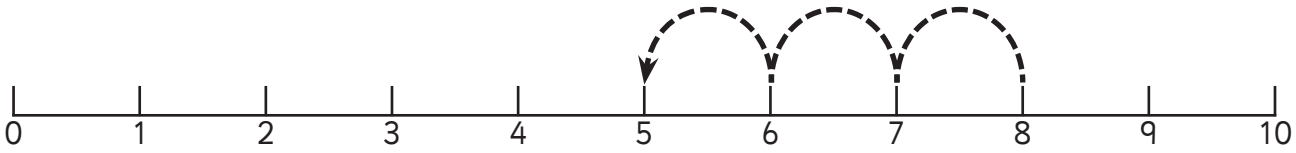


□ – □ = □

Subtraction within 10 – 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 = ?

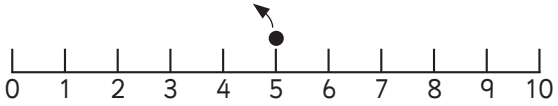


We start at 8 and jump back 3 spaces.

8 – 3 = 5

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

a 5 – 3 =

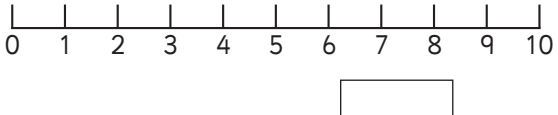


b 9 – 2 =

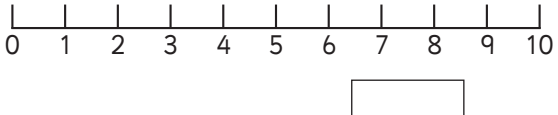
c 4 – 2 =

d 10 – 5 =

e 7 – 6 =



f 10 – 2 =

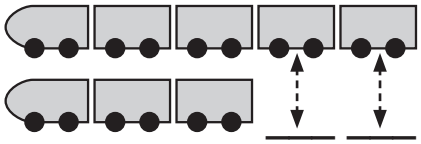


Remember we count the **jumps or spaces**, not the numbers!

Subtraction within 10 – 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.

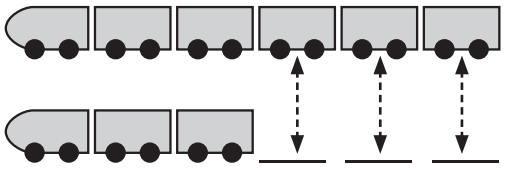
If they both had 5 carriages, they would be the same.

What is the difference?

The difference is 2 carriages.

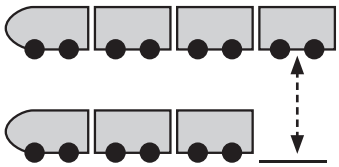
1 What is the difference?

a



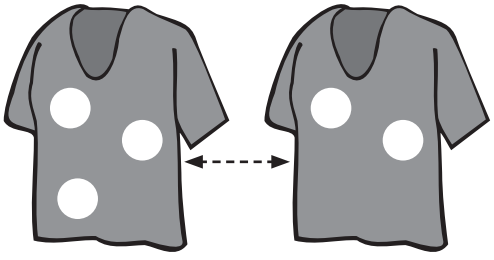
The difference is ☐

b



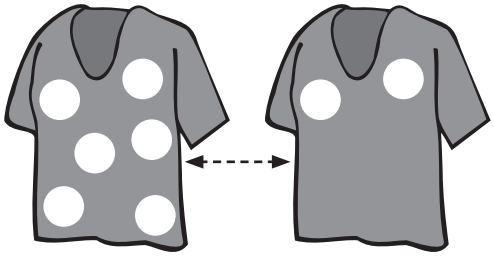
The difference is ☐

c



The difference is ☐

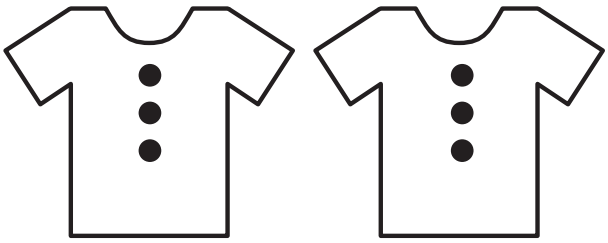
d



The difference is ☐

Subtraction within 10 – find the difference

What if there is no difference?
How do we say or record that?

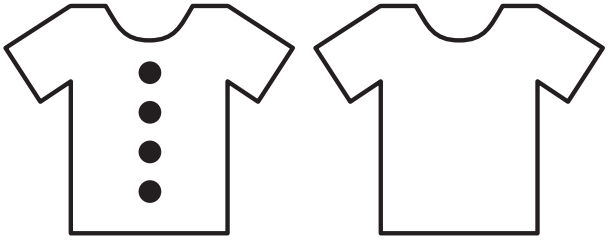


These shirts both have 3 buttons.

There is **no** difference.
The difference is **0**.

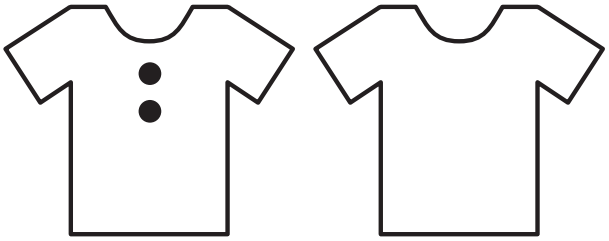
1 Draw buttons to show **no difference**.

a



The difference is ☐

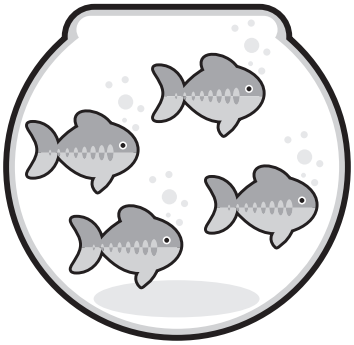
b



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 within 10 – find the difference

You will need: 1 partner or more, scissors, counters, a copy of this page

copy

What to do:

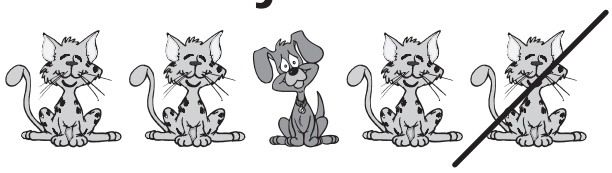
Cut out the number cards. Put the grey 10 card face up. Put the others in a pile face down. Each player draws one card. The person whose card has the greatest difference from 10 wins a counter. Play until all the cards are gone. Who has the most counters?

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

Subtracting within 10 – subtracting using number bonds

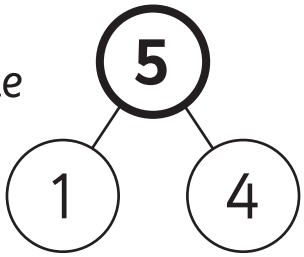
Now that we've learnt our number bonds up to 10, we can use them to solve number problems.
Look at this problem.

How many animals are left?



5 – 1 = 4

We can use a part-whole model to show this.

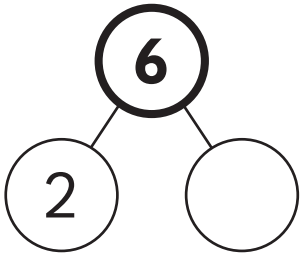


1 Fill in the missing numbers.

a

= ☐

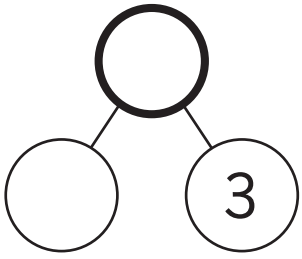
6 – 2 = ☐



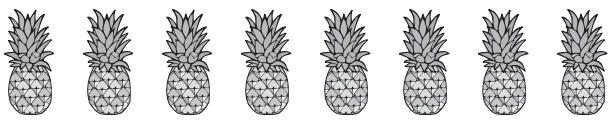
b

= ☐

☐ – 3 = ☐

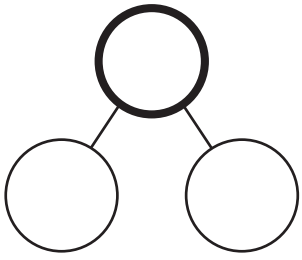


c



= ☐

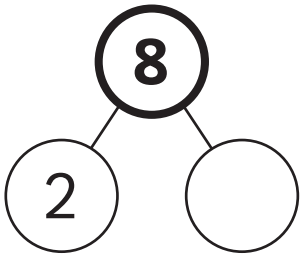
☐ – ☐ = ☐



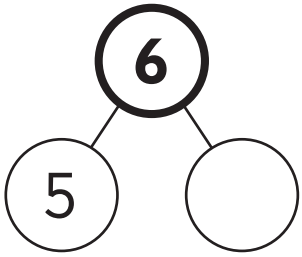
Subtracting within 10 – subtracting using number bonds

1 Complete the number sentences using the part-whole model.

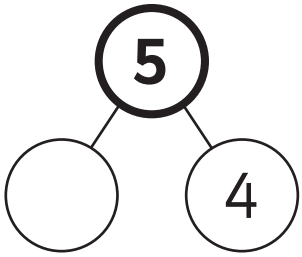
a 8 – ☐ = 2



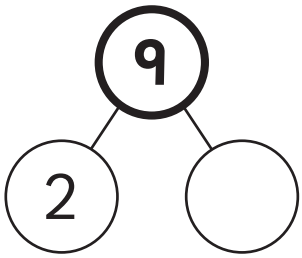
b 6 – ☐ = 5



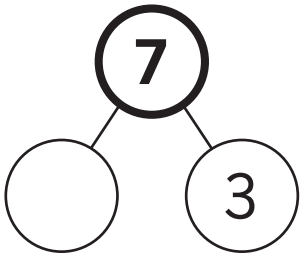
c 5 – ☐ = ☐



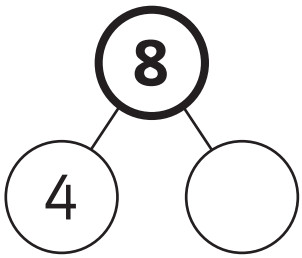
d 9 – ☐ = ☐



e 7 – ☐ = ☐



f ☐ – ☐ = ☐



Subtracting within 10 – word problems

1 What are some words or signs we use when we subtract or talk about subtracting?

2 Write the missing numbers.

a Ali had 3 stripy socks. He loses 1.

How many does he have left?

3 – 1 = ☐

Ali now has ____ socks.

b The shop has 7 shirts. They sell 3 shirts.

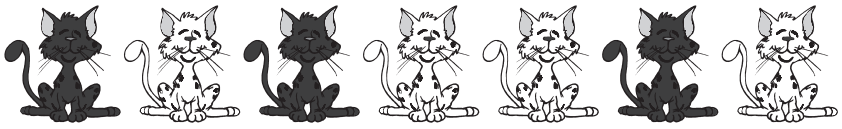
How many shirts do they have left?

7 – ☐ = ☐

There are ____ shirts left.

Subtracting within 10 – word problems

1 Write the missing numbers.



a There are ____ cats altogether.

3 cats are black.

How many cats are white?

7 – ☐ = ☐

There are ____ white cats.

b Caty has 8 balloons.

____ of them are white.

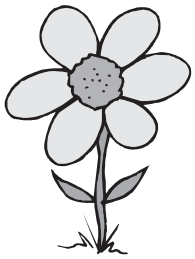
How many black ones does she have?

☐ – ☐ = ☐

She has ____ black balloons.

Subtracting within 10 – word problems

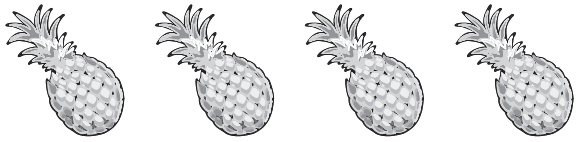
1 Cross out the objects and write the missing numbers.



a Cross out 3 petals.

6 – 3 = ☐

There are ____ petals left.



b Cross out 2 pineapples.

☐ – ☐ = ☐

There are ____ pineapples left.

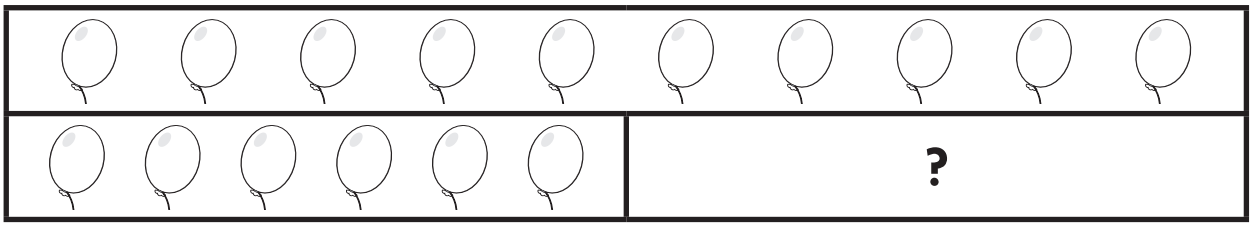
c Take away 4 stars.

☐ – ☐ = ☐

There are ____ stars left.

Subtracting within 10 – word problems

1 Draw pictures and then write the fact.



a There are 10 coloured balloons. 6 of them are green.
The rest are blue.

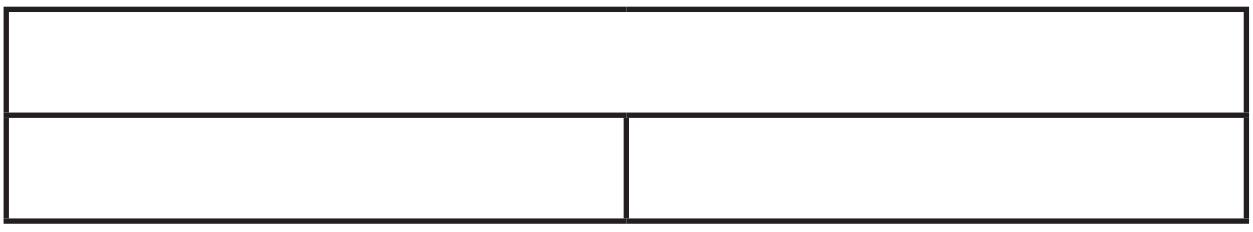
How many are blue?

10 – 6 = ☐ There are _____ blue balloons.

b Class 1S has 8 balls. 2 of them are tennis balls.
The rest are footballs.

How many footballs do they have?

☐ – ☐ = ☐ There are _____ footballs.



c There are 7 apples. 5 apples are green. The rest are red.

How many red apples are there?

☐ – ☐ = ☐ There are _____ red apples.

Subtracting within 10 – word problems

You will need: a partner, scissors, 10 counters, a copy of this page and page 59

C copy

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.

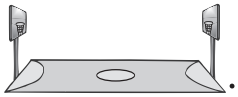
Mia had 6 butterflies. 4 butterflies flew away. How many butterflies did she have left?

Jack had 10 balloons. 3 balloons popped. How many balloons did he have left?

Subtracting within 10 – word problems

C copy

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

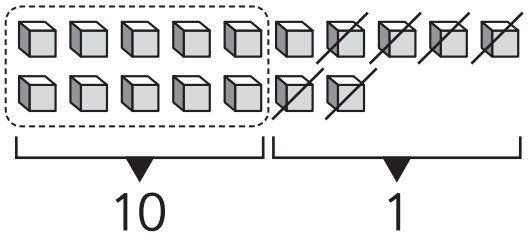
5 – 2 = 3

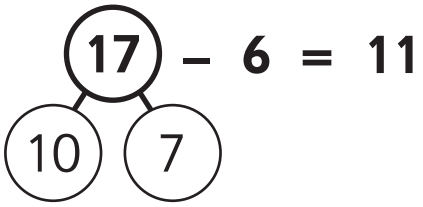
8 – 6 = 2

Subtraction within 20 – crossing out

When we add ones it can be helpful to split the teen number into tens and ones.

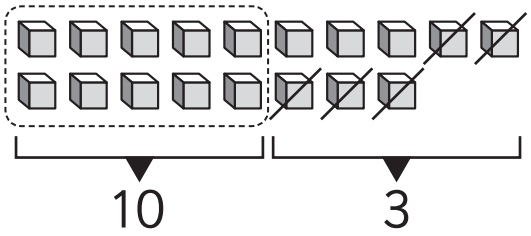
Look at **17 – 6 = ?**

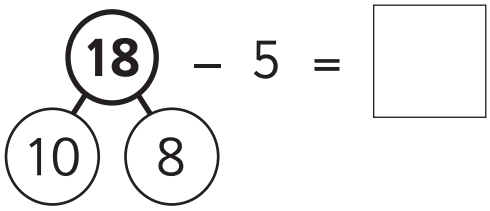




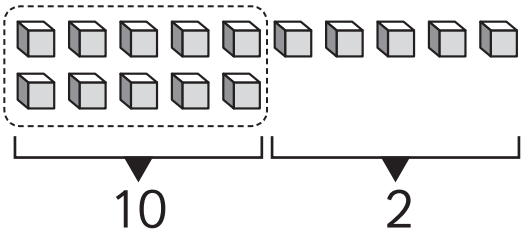
1 Finish the facts.

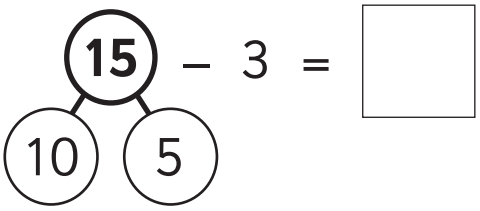
a 18 – 5 = ☐



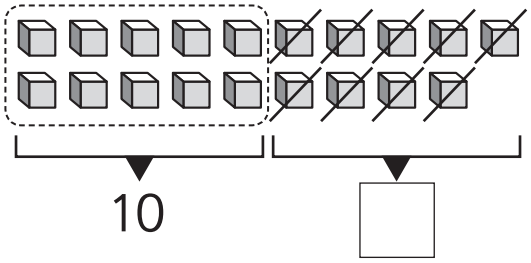


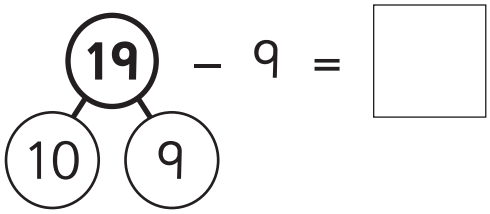
b 15 – 3 = ☐



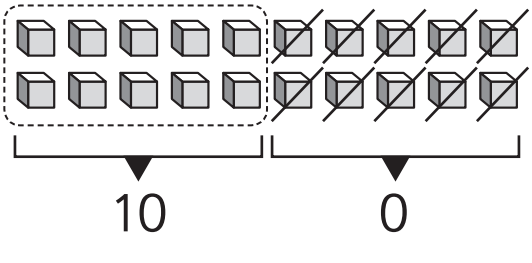


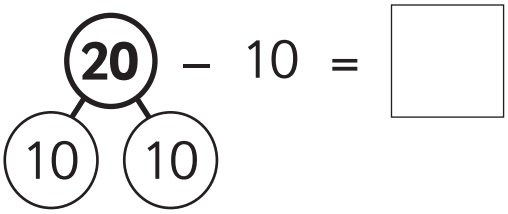
c 19 – 9 = ☐





d 20 – 10 = ☐





Subtraction within 20 – crossing out

1 Draw pictures and finish the facts.

a 15 – 3 = ☐

b 18 – 4 = ☐

c 19 – 9 = ☐

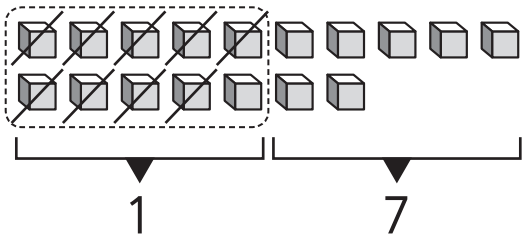
d 17 – 6 = ☐

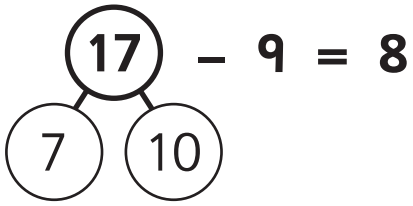
e 16 – 5 = ☐

Subtraction within 20 – crossing out

If we try to subtract the ones, we don't have enough ones, so instead we subtract the ones from the ten.

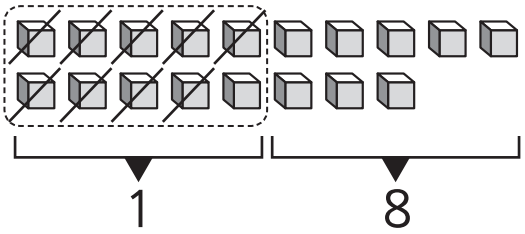
Look at **17 – 9 = ?**

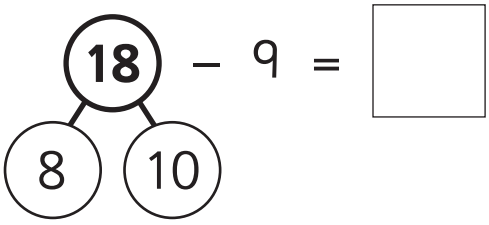




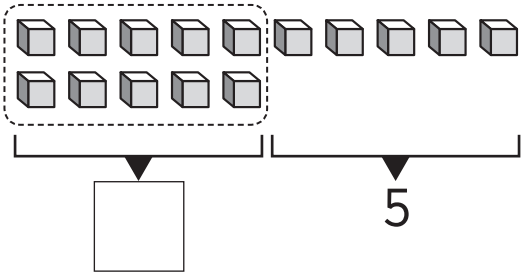
1 Finish the facts.

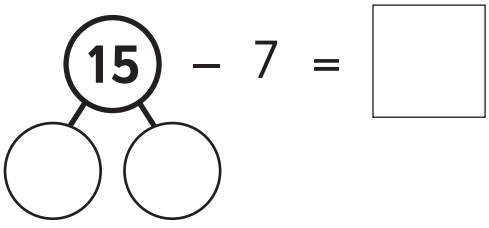
a 18 – 9 = ☐





b 15 – 7 = ☐

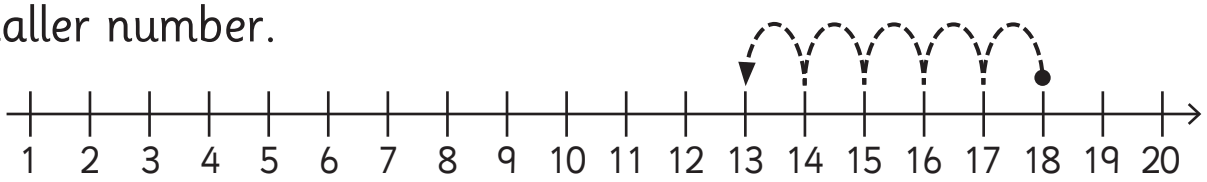




Subtraction within 20 – counting back

Read the subtraction sentence: **18 – 5 =** **?**

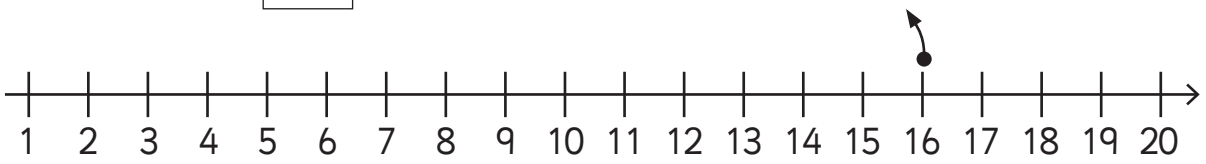
Start by finding the largest number and count back the smaller number.



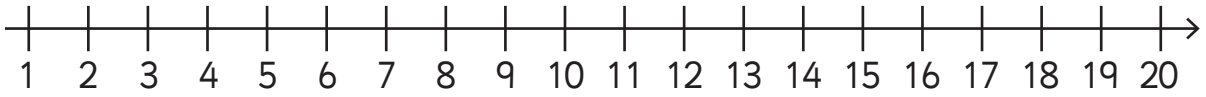
The number you land on is the answer, so **18 – 5 = 13**

1 Count back using the number line. Complete the number sentences.

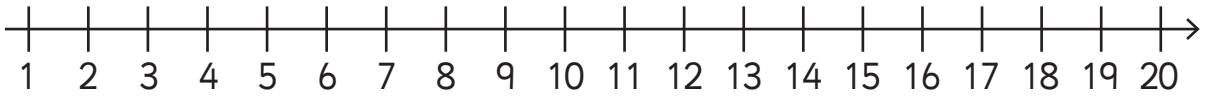
a 16 – 3 = ☐



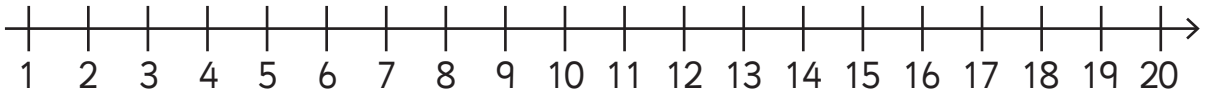
b 19 – 5 = ☐



c 14 – 6 = ☐



d 17 – 3 = ☐



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

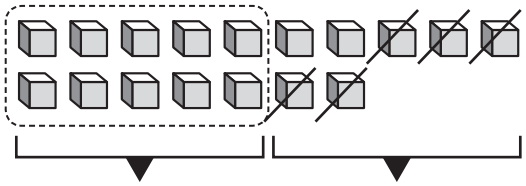
Subtraction within 20 – word problems

Remember! With bigger numbers it can be helpful to look at the tens and the ones separately.

Look at this problem.

There are 17 cubes. Mrs Green gives 5 cubes to Tom.
How many cubes are left?

17 – 5 = ?

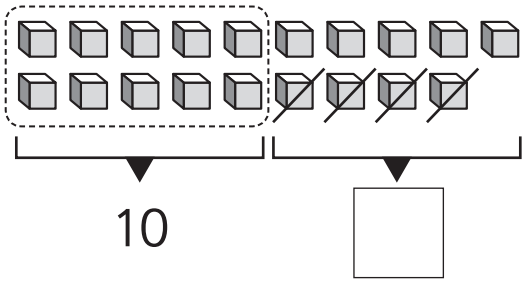


17 – 5 = 12

There are **12** cubes left.

1 Cross out the objects and solve the problem.

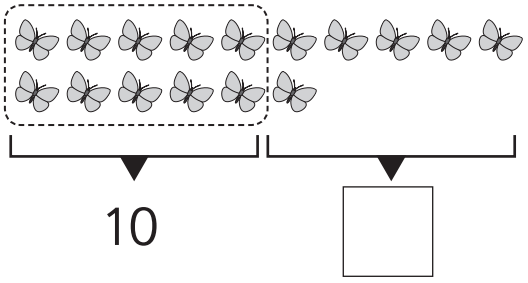
a There are 19 cubes. Lucy takes 4 away. How many are left?



19 – 4 = ☐

There are ____ cubes left.

b There are 16 butterflies. 5 fly away. How many are left?



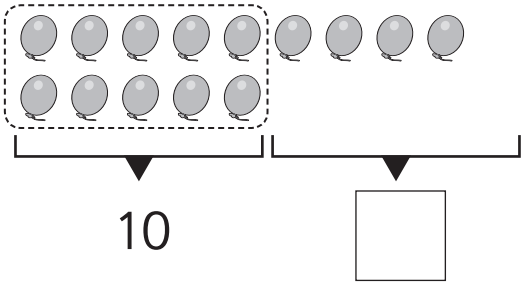
16 – 5 = ☐

There are ____ butterflies left.

Subtraction within 20 – word problems

1 Cross out the objects and solve the problem.

There are 14 balloons. 3 float away. How many are left?



14 – 3 = ☐

There are ____ balloons left.

2 Draw objects and solve the problem.

a Lucy has 18 cubes. She gives 6 to Tom. How many does she have left?

☐ – ☐ = ☐

Lucy has ____ cubes left.

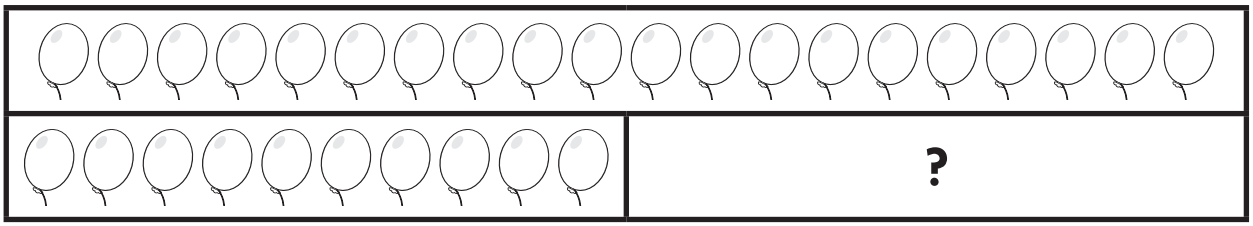
b Rory has 17 counters. 6 counters are yellow. The rest are red. How many counters are red?

☐ – ☐ = ☐

There are ____ red counters.

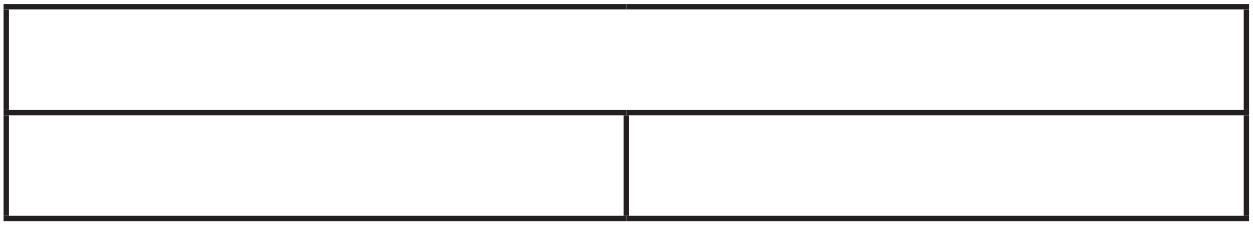
Subtraction within 20 – word problems

1 Draw pictures and then write the fact.



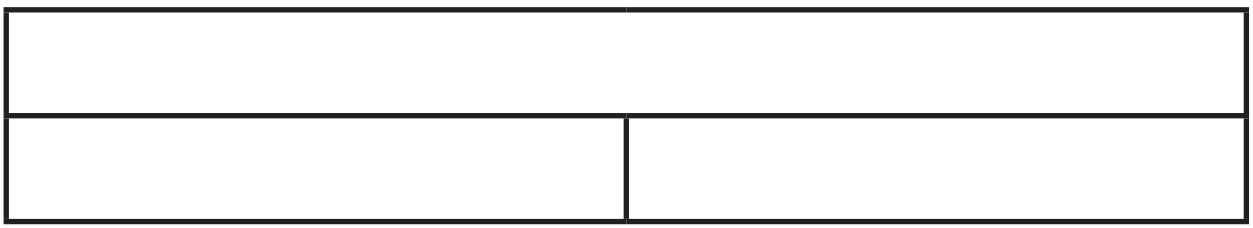
a There are 20 coloured balloons. 10 of them are blue. The rest are red.
How many are red?

20 – 10 = ☐ There are ____ red balloons.



b Class 1S has 17 apples. 6 of them are eaten.
How many apples are left?

☐ – ☐ = ☐ There are ____ apples left.



c There are 16 pencils. 5 of them are blunt and the rest are sharp. How many are sharp?

☐ – ☐ = ☐ There are ____ sharp pencils.

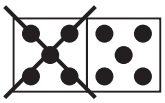
Subtraction within 20 – doubles

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

Look at **10 – 5 =** ?

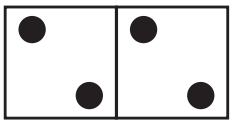
If we know the doubles fact **5 + 5 = 10** we know that

10 – 5 = 5

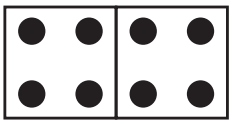


1 Cover 1 side of the domino to help solve these subtraction problems.

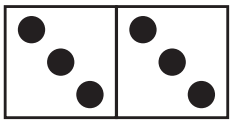
a 4 – 2 = ☐



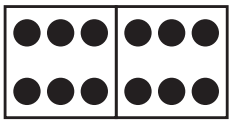
b 8 – 4 = ☐



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 = ☐

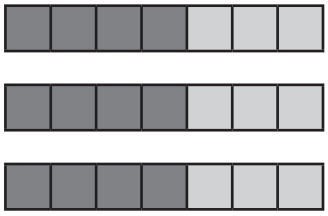
Subtraction within 20 – relating addition and subtraction

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.

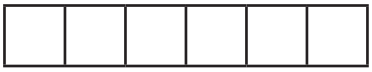
a

3 + 2 = 5

5 – 2 = ☐

5 – 3 = ☐

b

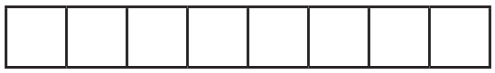


4 + 2 = 6

6 – 4 = ☐

6 – ☐ = ☐

c



5 + 3 = 8

8 – ☐ = ☐

8 – ☐ = ☐

2 Fill in the missing numbers in these facts.

4 + ☐ = ☐

☐ – ☐ = ☐

☐ – ☐ = ☐

Subtraction within 20 – explore

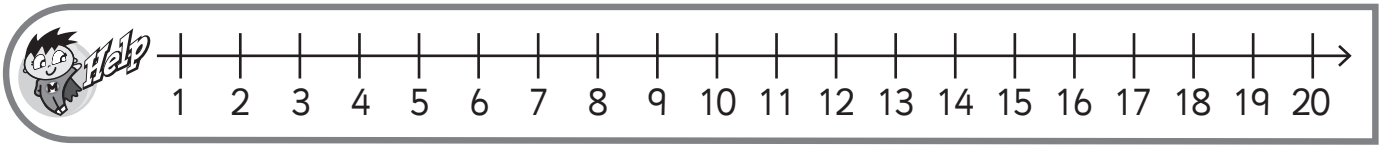
You will need:  a partner  a die

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	20	11	12	13
14	16	10	18	10



Addition and subtraction – fact families

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

Can you see these number sentences in the picture below?

$3 + 2 = 5$
$2 + 3 = 5$
$5 - 3 = 2$
$5 - 2 = 3$

1 Write four number sentences for each picture.

a

$3 + 4 = 7$
$4 + 3 = \square$
$7 - 4 = 3$
$7 - \square = 3$

b

$4 + 2 = \square$
$2 + \square = \square$
$6 - \square = 4$
$6 - \square = \square$

Addition and subtraction – *fact families*

1 Write four number sentences for each picture.

a

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

b

□ + □ = □

□ + □ = □

□ − □ = □

□ − □ = □

c

□ + □ = □

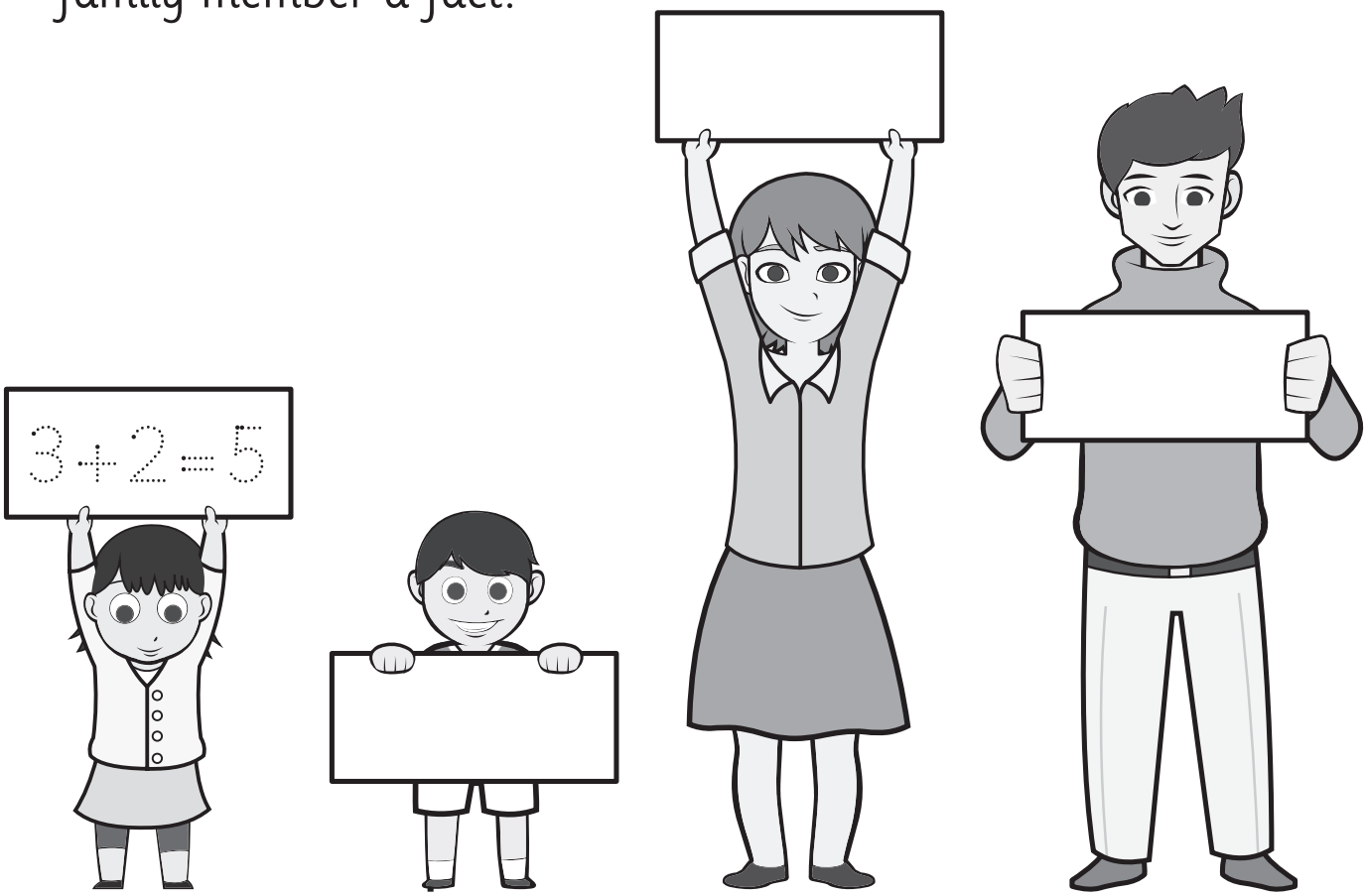
□ + □ = □

□ − □ = □

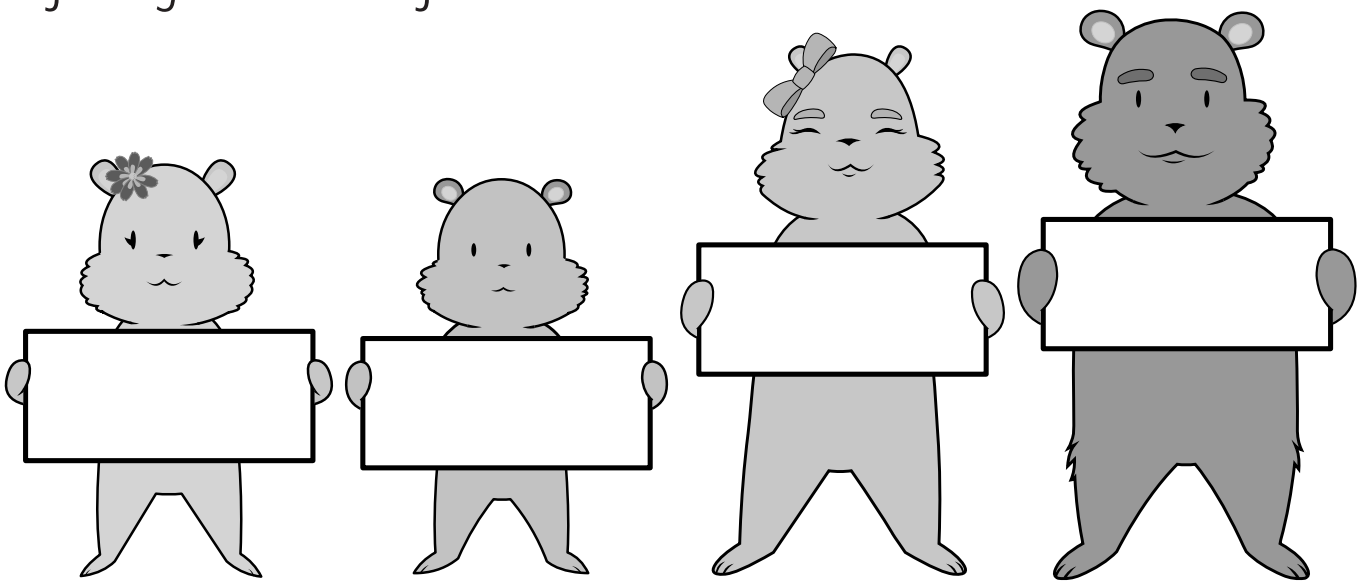
□ − □ = □

Addition and subtraction – fact families

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



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 74

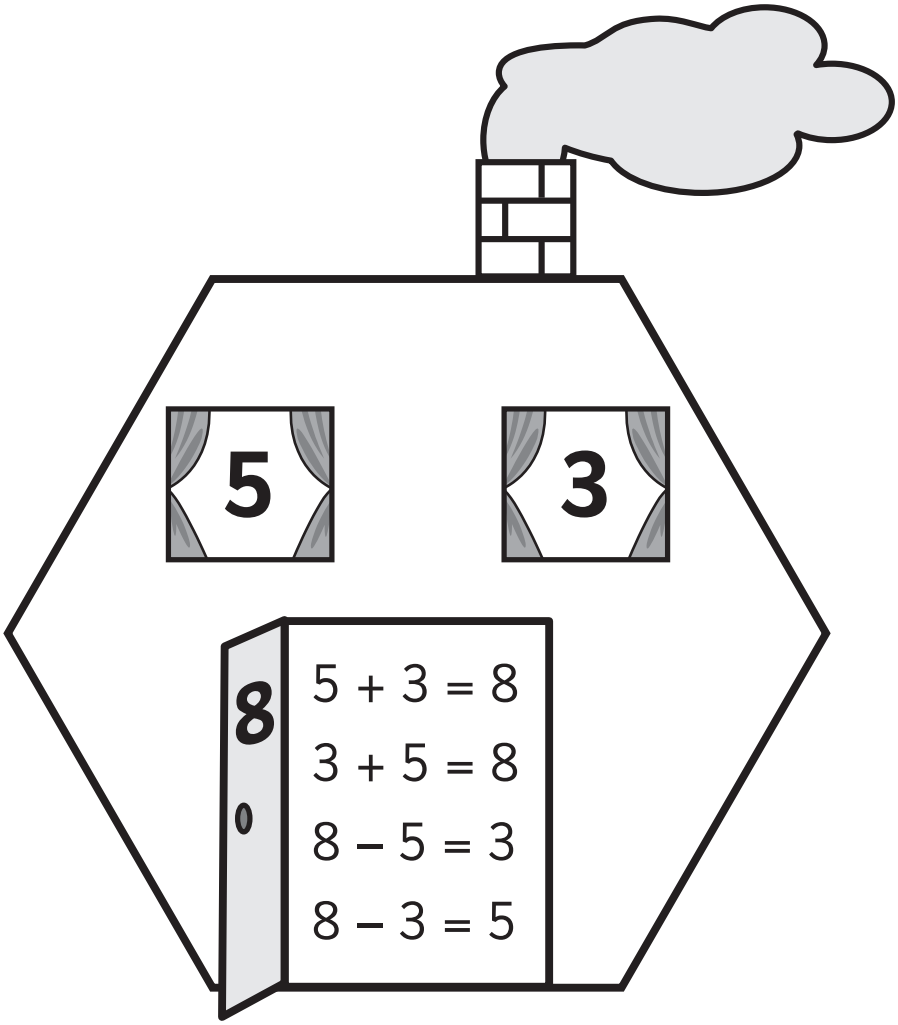
What to do:

Cut out the hexagon house on page 74. 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.

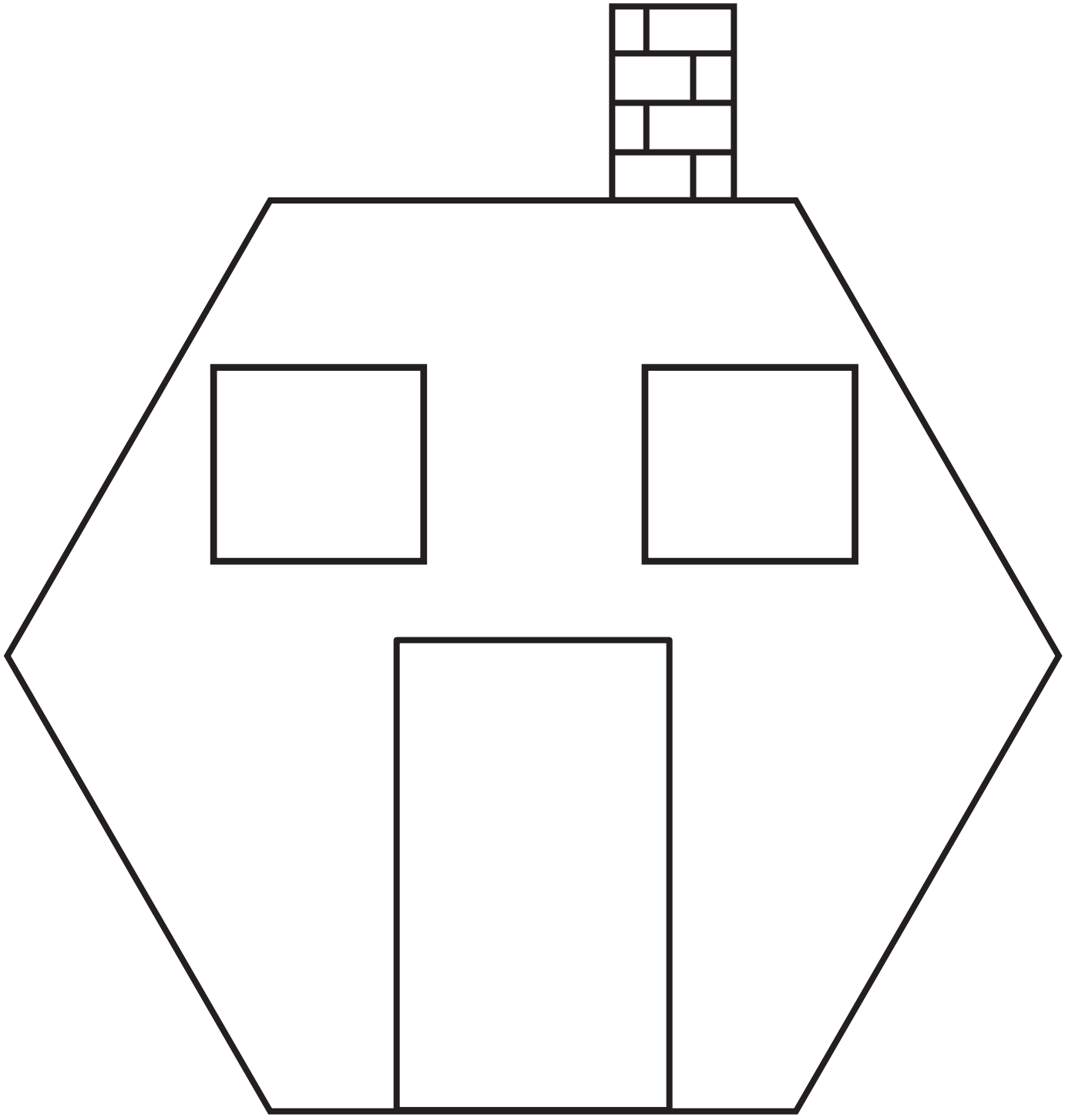
Carefully cut the door so it swings open. Tape the sticky note to the back of the hexagon behind the door. Write the matching fact family on the note so that when you open the door, you see your fact family. Decorate your house.

What to do next:

Stick the classes' houses onto 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!

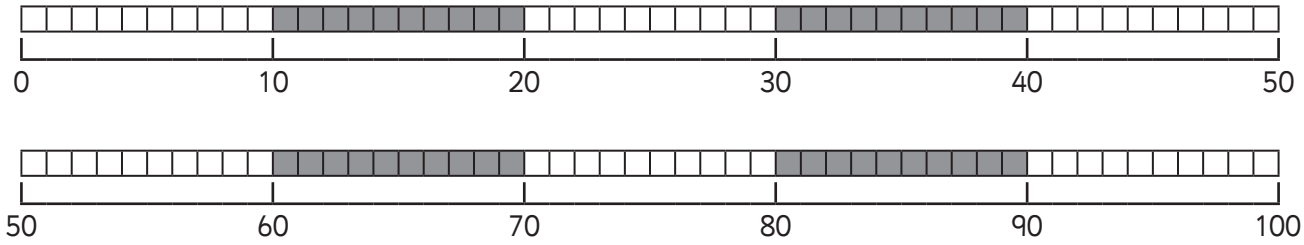


Addition and subtraction – *fact families*

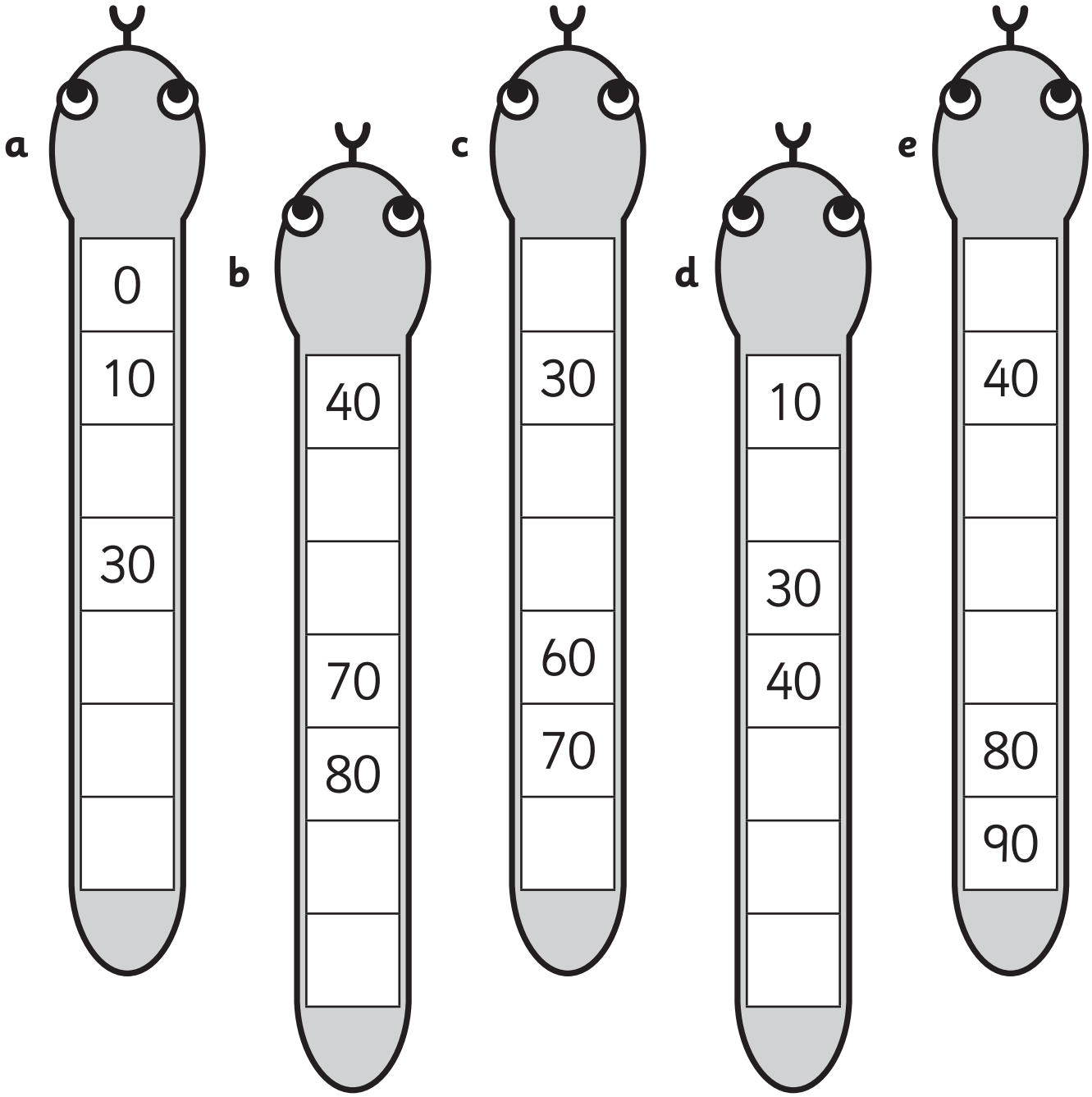


Addition and subtraction – tens

Use the number tracks to practice counting in tens.



1 Count in tens down the snake and write the missing numbers.



Addition and subtraction – tens

We can use a 100 square to help us add tens. Moving down one square is the same as counting ten 1s across the hundred square.

+10 ⬇

1	2	3	4	5	6	7	8	9	10
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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

15 + 10 = 25

1 Complete these addition sentences using the 100 square.

a 10 + 10 = ☐

b 10 + 30 = ☐

c 20 + 10 = ☐

d 20 + 30 = ☐

e 30 + 20 = ☐

f 40 + 10 = ☐

g 12 + 10 = ☐

h 18 + 30 = ☐

i 27 + 10 = ☐

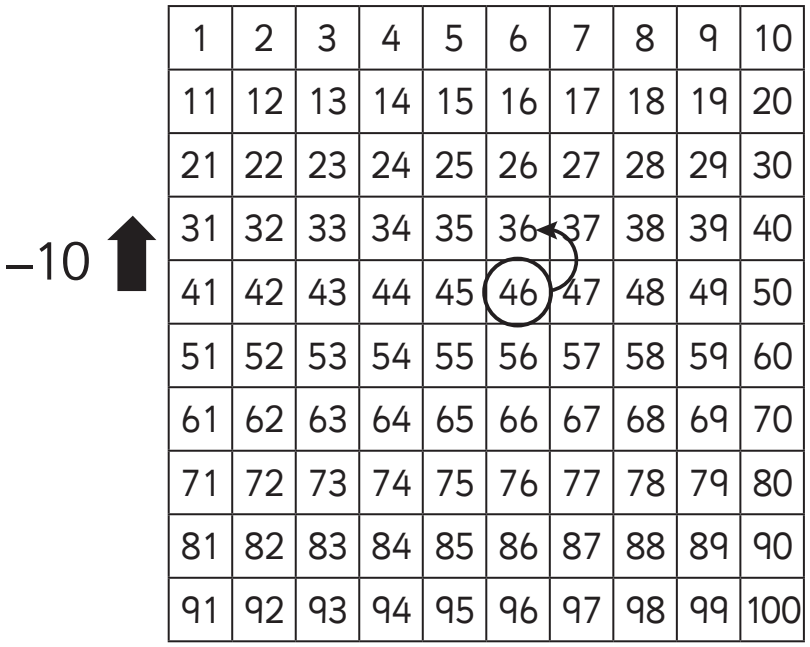
j 25 + 20 = ☐

k 21 + 20 = ☐

l 13 + 30 = ☐

Addition and subtraction – tens

We can use a 100 square to help us subtract tens. Moving up one square is the same as counting back ten 1s across the hundred square.



1	2	3	4	5	6	7	8	9	10
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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1 Complete these subtraction sentences using the 100 square.

a 40 – 10 = ☐

b 30 – 10 = ☐

c 20 – 10 = ☐

d 50 – 40 = ☐

e 30 – 20 = ☐

f 40 – 20 = ☐

g 23 – 10 = ☐

h 49 – 30 = ☐

i 45 – 10 = ☐

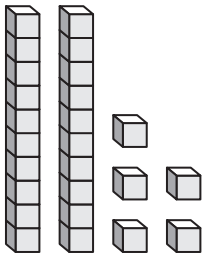
j 44 – 20 = ☐

k 37 – 20 = ☐

l 32 – 20 = ☐

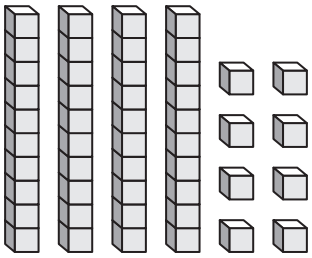
Addition and subtraction – counting in tens and ones

1 Count the numbers of tens and ones. Complete the table and number sentence.



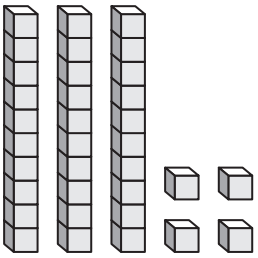
tens	ones

a ☐ tens + ☐ ones = ☐



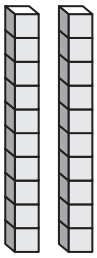
tens	ones

b ☐ tens + ☐ ones = ☐



tens	ones

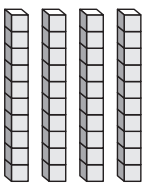
c ☐ tens + ☐ ones = ☐



tens	ones

d ☐ tens + ☐ ones = ☐

When there are no ones we use 0 as a placeholder.



tens	ones
4	0

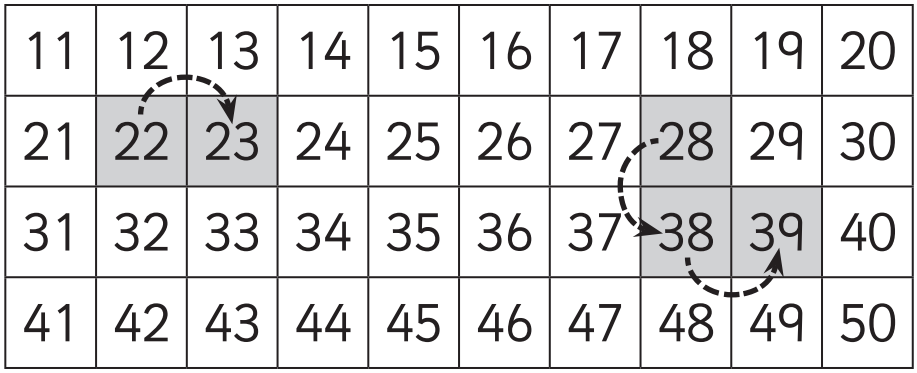
4 tens + 0 ones = 40

Addition and subtraction – counting on 20–50

We can also use the 100 square to help us count on in tens and ones.

22 + 1 = 23

28 + 11 = 39



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 in tens and ones to finish these number sentences.

a 33 + 12 = ☐ **b** 28 + 21 = ☐ **c** 12 + 24 = ☐

d 14 + 13 = ☐ **e** 32 + 16 = ☐ **f** 17 + 21 = ☐

3 Fill in the gaps.

	+ 1	+ 10	+ 11
12	13	22	
28			
33		43	
40	41		

Addition and subtraction – counting back 20–50

We can also use the 100 square to help us count back in tens and ones.

34 – 1 = 33

47 – 11 = 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 in tens and ones to finish these number sentences.

a 50 – 10 = ☐ **b** 35 – 11 = ☐ **c** 27 – 15 = ☐

d 34 – 21 = ☐ **e** 48 – 25 = ☐ **f** 44 – 13 = ☐

3 Fill in the gaps.

	– 1	– 10	– 11
23		13	
49			
31	30		
24			

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

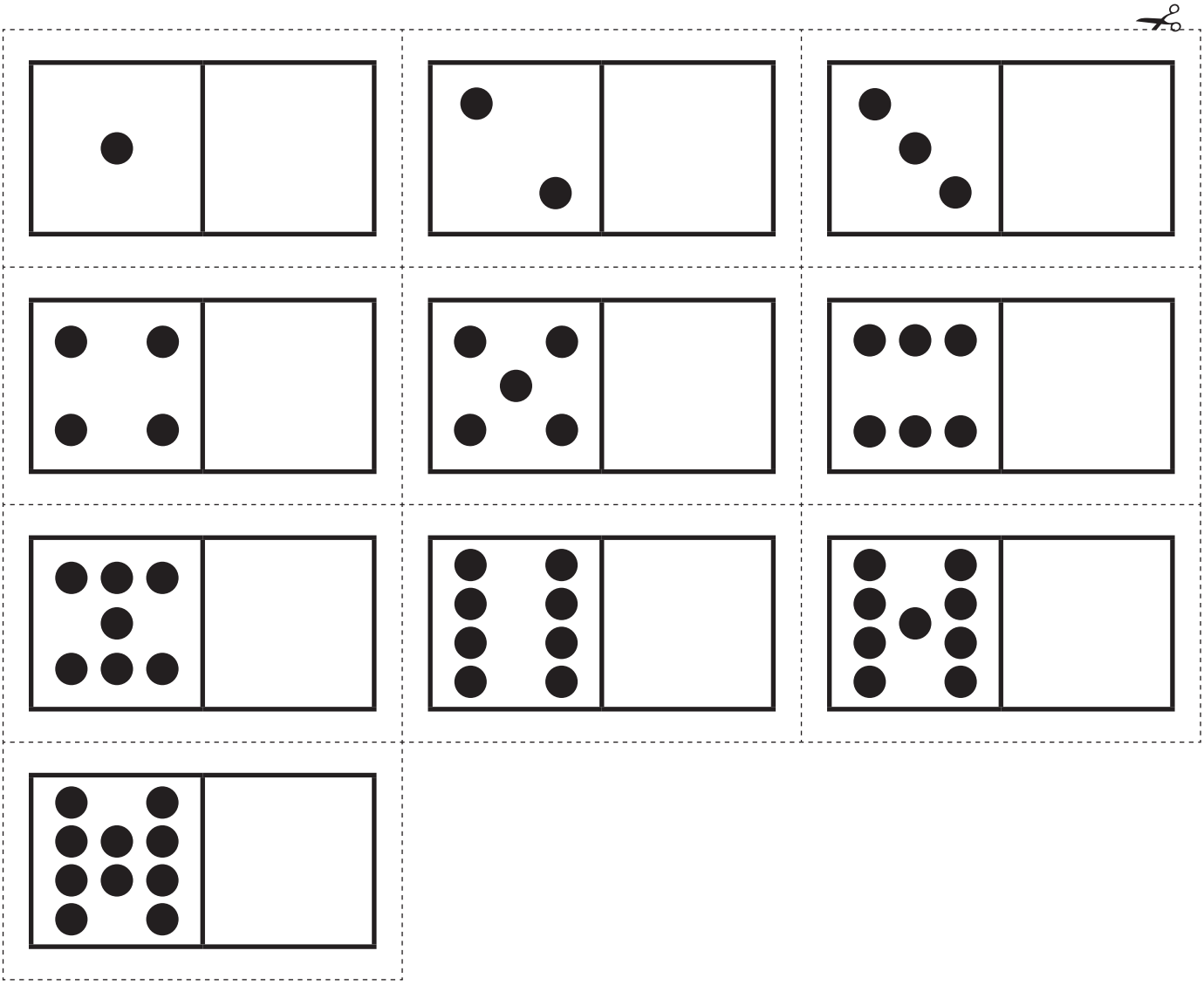
You will need: a partner scissors a pencil

C copy

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

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

□ + 3 = 6

□ + 4 = 10

□ + 2 = 4

□ − 2 = 4

□ − 1 = 2

Player 2

□ + 2 = 5

□ + 6 = 11

□ + 1 = 5

□ − 2 = 4

7 − □ = 5

Player 3

□ + 4 = 8

□ + 5 = 11

□ + 5 = 6

□ − 1 = 2

8 − □ = 6

Player 4

□ + 4 = 9

□ + 3 = 7

□ + 5 = 6

□ − 3 = 3

□ − 1 = 1

Addition and subtraction – explore

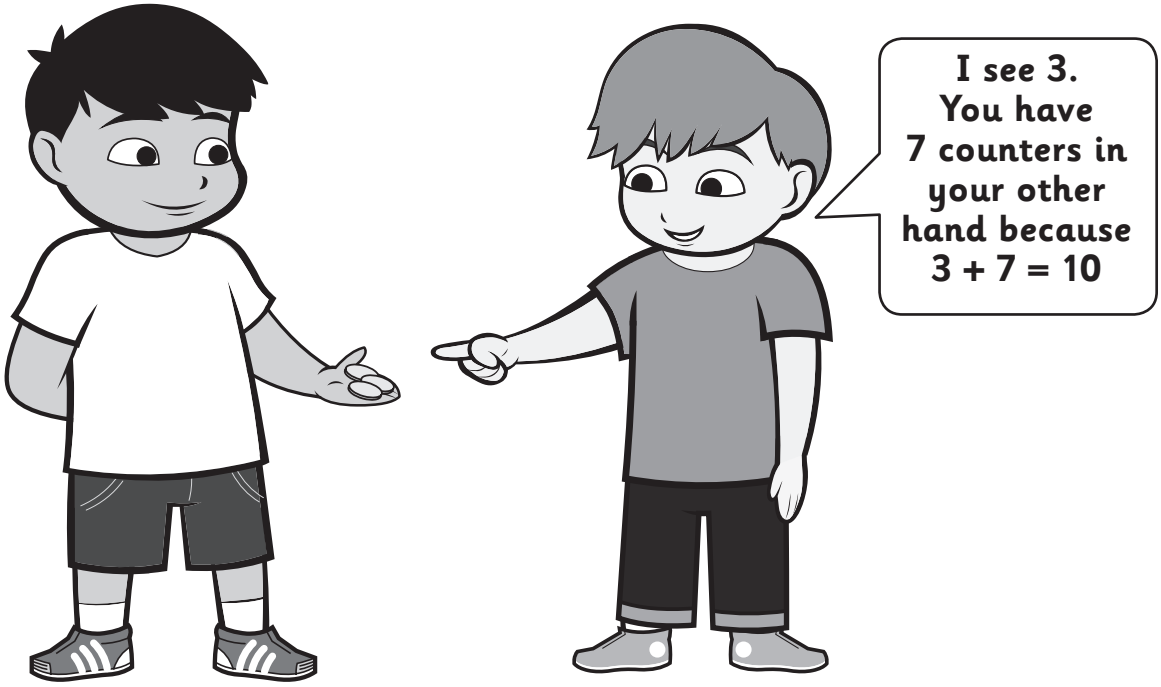
You will need: a partner 10 counters

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 get 5 points, wins.



What to do next:

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

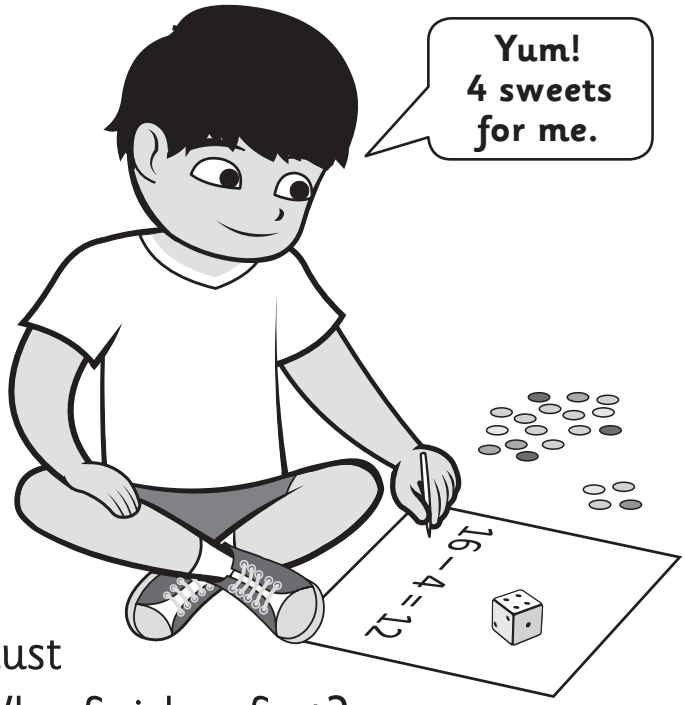
Addition and subtraction – explore

You will need:  partners  a die

 a mini packet of coloured sweets or sultanas each

What to do:

Count how many coloured sweets or sultanas are in your packet. Take turns rolling the die. Subtract that number of sweets, then say and write your number fact. If you are right, those sweets are yours to be eaten!



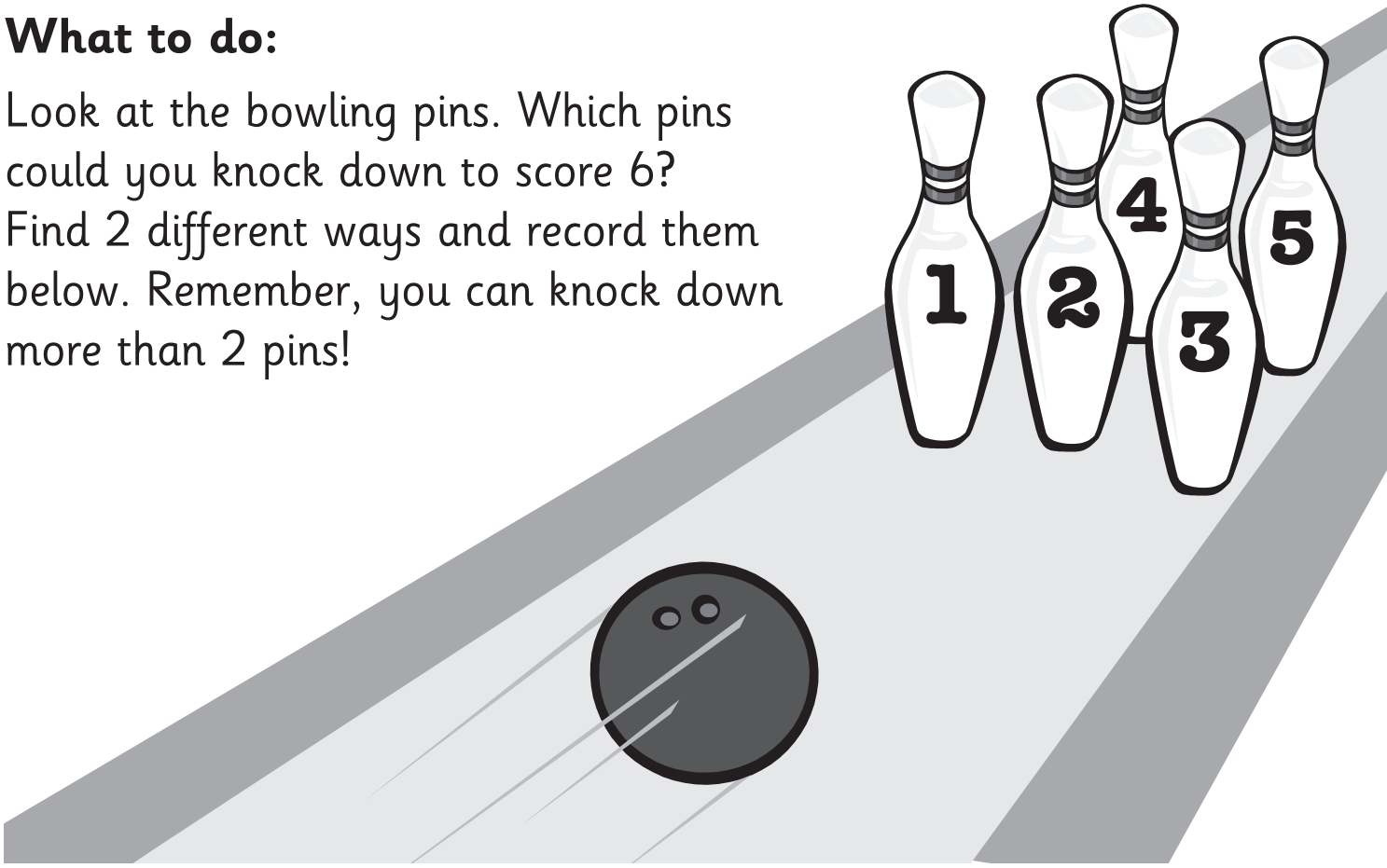
Play until you get to zero. You must roll the exact number to finish. Who finishes first?

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 – 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?

☐ ☐ ☐ = ☐

b Thomas had 8  .
5 sailed away.
How many  did he have left?

☐ ☐ ☐ = ☐

c There are 20  .
6 roll away.
How many  are left?

☐ ☐ ☐ = ☐

d Bronte has 3  .
Lucy has 9  .
How many teddies do they have altogether?

☐ ☐ ☐ = ☐

Addition and subtraction – word problems

1 Solve:

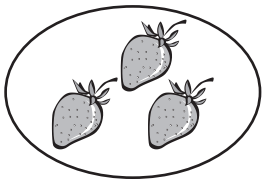
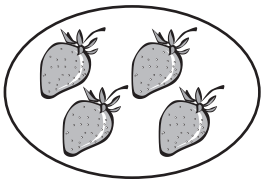
a At the start of the day there were 10  .
At the end of the day there were 3  left.
How many  were sold?

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?

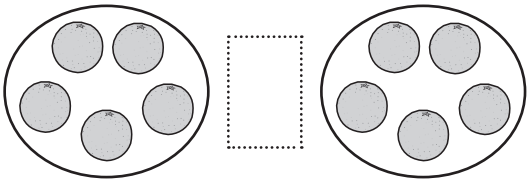
Multiplication – equal groups

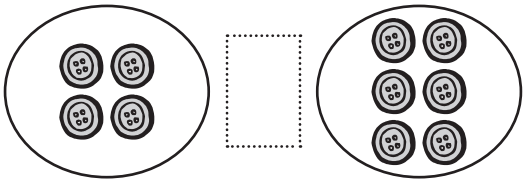
When we count in groups, the groups must be **equal** or the **same**. Are these groups equal?

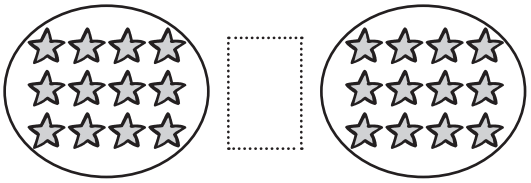
3 strawberries   4 strawberries

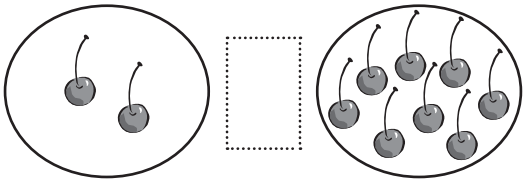
No, one group has 1 more strawberry. They are **not equal**.

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

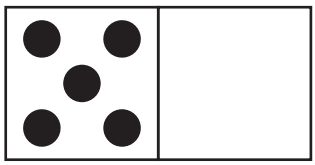
a 

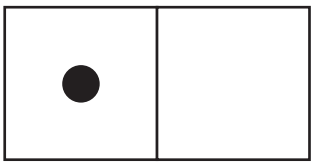
b 

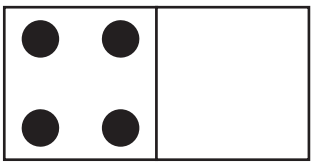
c 

d 

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

a 

b 

c 

3 Mmmmmm, sweets. Draw some sweets 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  . $2 + 2 + 2 = 6$

There are **2**  in each bunch. $2 \times 3 = 6$

There are **6**  altogether. 3 groups of 2 is 6

1 How many ...

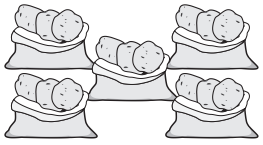
a  ?

 2 bunches of 3  is ☐  altogether.

3 + 3 = ☐

2 × 3 = ☐

b  ?

 ☐ bags of ☐  is ☐  altogether.

3 + 3 + 3 + 3 + 3 = ☐

5 × 3 = ☐

Multiplication – equal groups

1 How many ...

a  ?

 ☐ plates of ☐  is ☐  altogether.

2 + 2 + 2 + 2 = ☐

4 × 2 = ☐

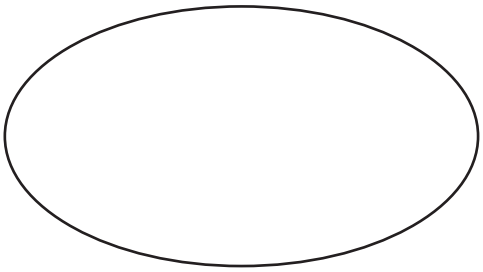
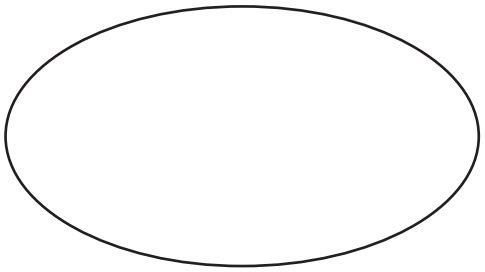
b  ?

 ☐ bowl of ☐  is ☐  altogether.

1 × 5 = ☐

2 Draw and finish the number facts.

Draw 3 cupcakes on each plate.

How many cakes?

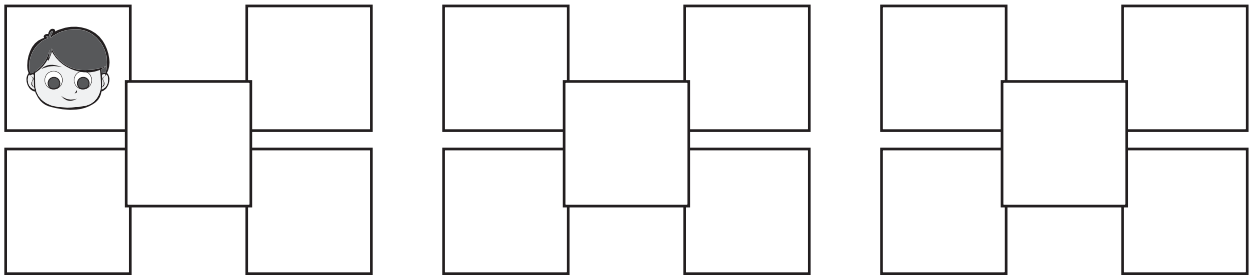
☐ groups of ☐  is ☐  altogether.

3 + 3 = ☐ 2 × 3 = ☐

Multiplication – equal groups

1 Draw and finish the number facts.

a Draw 5 faces in each window.



How many faces?

☐ groups of ☐  is ☐  altogether.

5 + 5 + 5 = ☐ 3 × 5 = ☐

b Draw 2 cats on each mat.

How many cats?

☐ groups of ☐  is ☐  altogether.

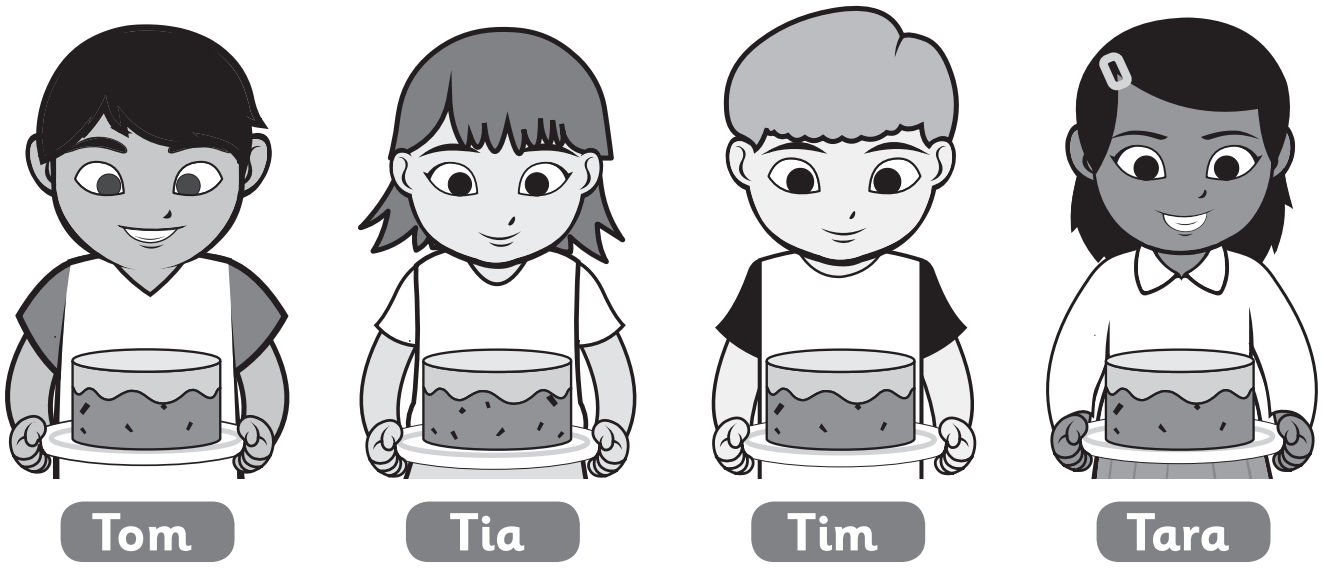
☐ + ☐ + ☐ = ☐ 3 × 2 = ☐

Multiplication – equal groups

You will need:  pencils

What to do:

These children are all turning 5 today.



a Draw the right number of candles on the cakes.

b How many candles are there altogether? ☐

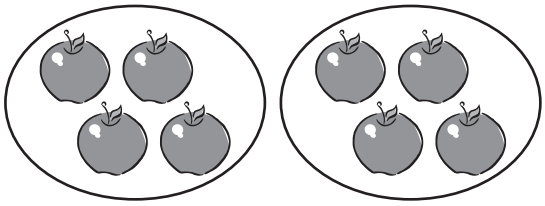
What to do next:

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

Multiplication – groups and arrays

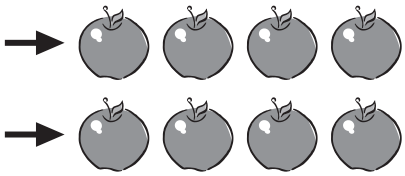
We can arrange objects into **groups** or into **rows.**

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



There are **8** apples altogether.

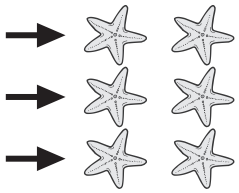
This is **2** rows of **4** apples.



There are still **8** apples altogether.

1 How many are there?

a

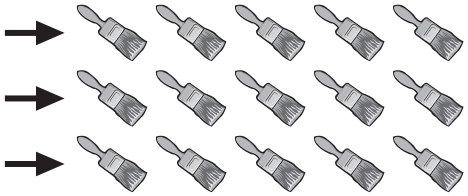


☐ rows of ☐ is ☐

b

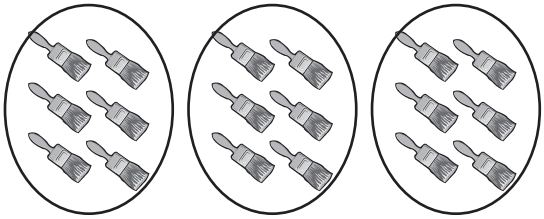
☐ groups of ☐ is ☐

c



☐ rows of ☐ is ☐

d



☐ groups of ☐ is ☐

2 Draw:

a 2 groups of 3 flowers

How many flowers? ☐

b 2 rows of 3 flowers

How many flowers? ☐

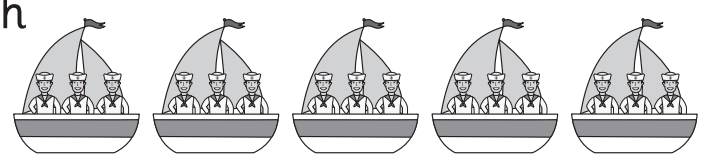
Multiplication – word problems

You will need:  pencils  counters  a partner

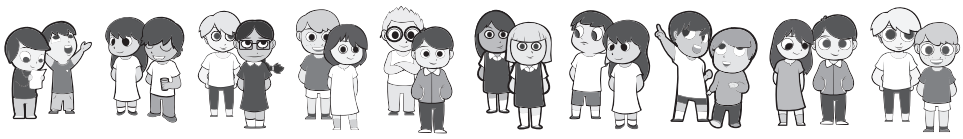
What to do:

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

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



b 1F line up after lunch in pairs. There are 10 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 × symbol

We know that ...

+ means add or join **–** means subtract **=** means the same as.

What does **×** mean? It means 'groups of' or 'rows of'.

2×5

We have 2 'rows of' 5

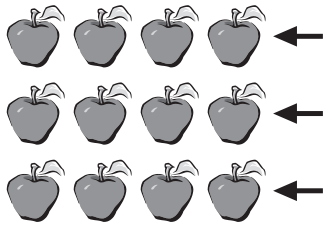

← 5 butterflies


← 5 butterflies

2 rows of 5 is 10 altogether. **2 × 5 = 10**

1 How many?

a

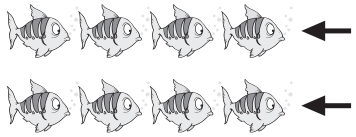


3 rows of 4 is ☐

☐ × ☐ = ☐

4 + 4 + 4 = ☐

b

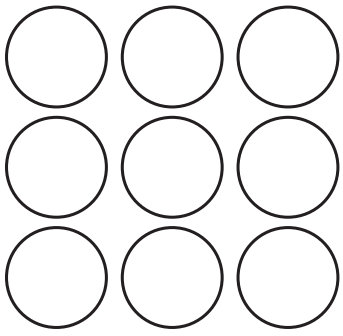


2 rows of ☐ is ☐

☐ × ☐ = ☐

☐ + ☐ = ☐

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  a rubber

copy

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 groups of 2 6 × 2 = ☐ 2+2+2+2+2+2 = ☐	3 groups of 3 3 × 3 = ☐ 3 + 3 + 3 = ☐	2 groups of 4 2 × 4 = ☐ 4 + 4 = ☐
4 groups of 3 4 × 3 = ☐ 3 + 3 + 3 + 3 = ☐	1 group of 7 1 × 7 = ☐ 7 = ☐	2 groups of 5 2 × 5 = ☐ 5 + 5 = ☐
2 groups of 8 2 × 8 = ☐ 8 + 8 = ☐	3 groups of 2 3 × 2 = ☐ 2 + 2 + 2 = ☐	5 groups of 1 5 × 1 = ☐ 1+1+1+1+1 = ☐
1 group of 5 1 × 5 = ☐ 5 = ☐	4 groups of 2 4 × 2 = ☐ 2 + 2 + 2 + 2 = ☐	2 groups of 2 2 × 2 = ☐ 2 + 2 = ☐

Multiplication – explore

You will need: a partner, 2 dice, cubes, sticky notes

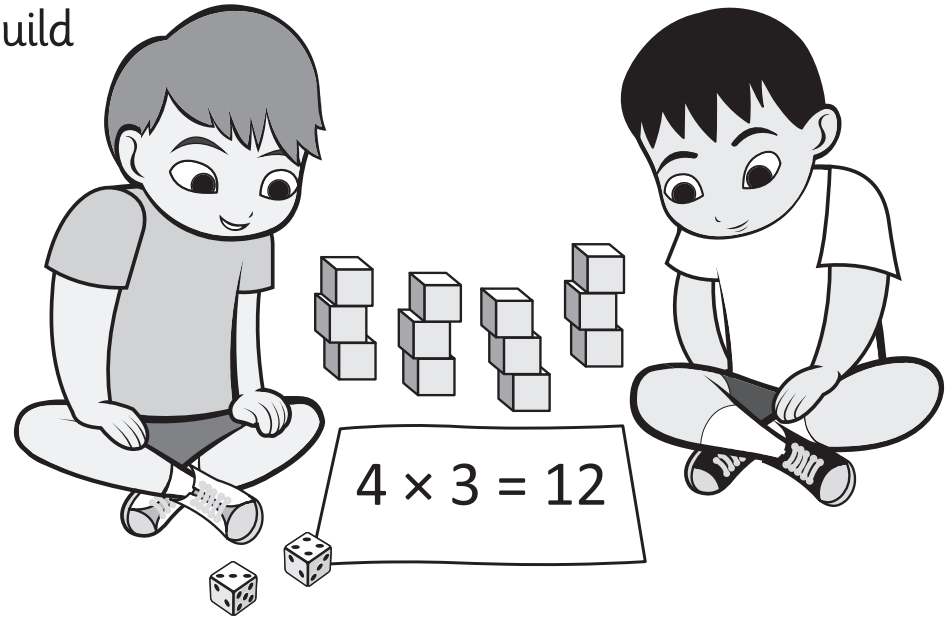
What to do:

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:

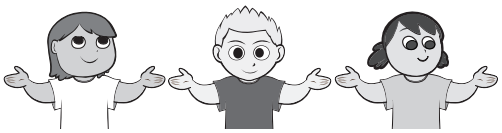
Take turns building a set of towers. Your partner works out what fact it shows and writes it.

Division – sharing

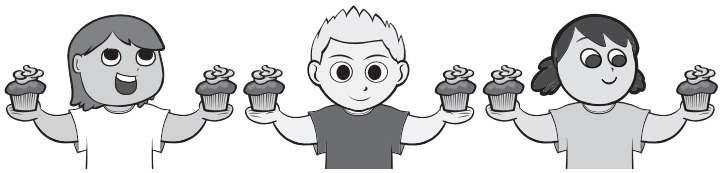
When we share things into groups evenly, every group has the same number. This means they are **equal**.
We call this division. The symbol for division is ÷.

Here are **6** cupcakes.

Here are **3** children.



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



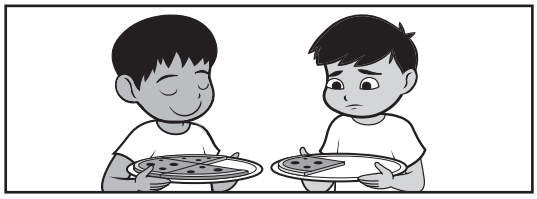
We call this **'sharing fairly'** because each share is equal.

6 divided by 3 is 2

6 ÷ 3 = 2

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

a



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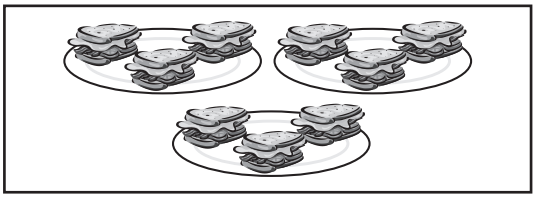

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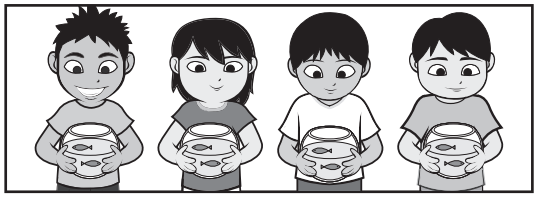
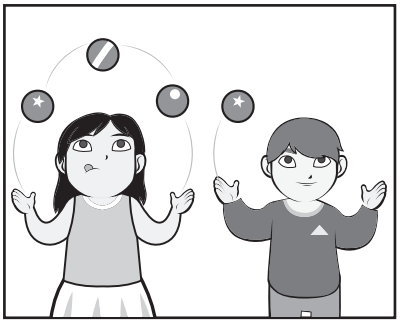


d



Division – sharing

You will need: a partner

C copy

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?

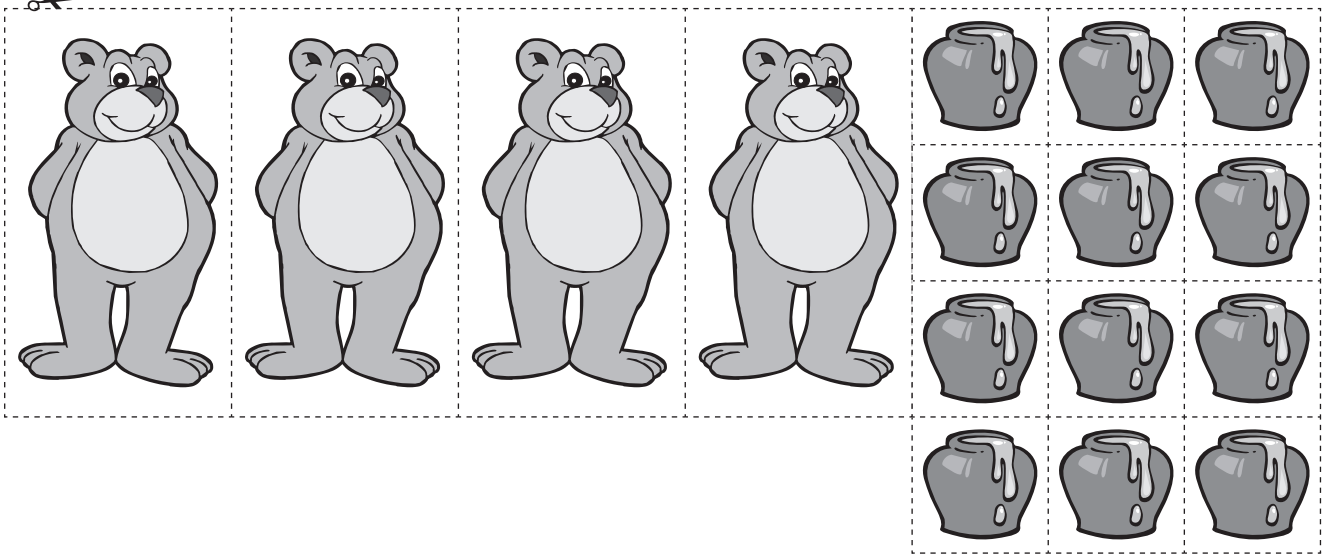
What to do next:

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

You will need:  a partner  counters

What to do:

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

a There are 10  on 5  .

How many  are there on each  ? ☐

10 divided by 5 is ☐

10 ÷ 5 = ☐

b There are 8  and 4 toy  .

How many  does each  get? ☐

8 divided by 4 is ☐

8 ÷ 4 = ☐

c 6  lay 12  .

How many  does each  lay? ☐

12 divided by 6 is ☐

12 ÷ 6 = ☐

Division – grouping

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

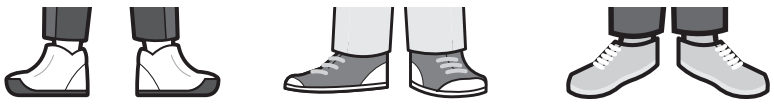
Each  needs 2  . We have 6  . How many  can we decorate?

We can decorate 3  .

$6 \div 2 = 3$

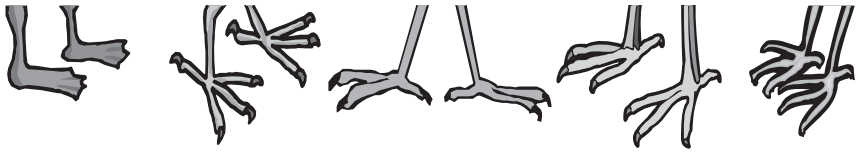
1 Circle groups of 2 feet.

a How many boys?



b How many girls?

c How many birds?



2 Draw 24 eyes. Circle groups of 2.

How many  ?

Division – grouping

You will need:  a partner  24 lolly sticks

What to do:

You are at the zoo. Pretend the lolly sticks are animal legs and work out how many animals could be at the zoo. Use all 24 lolly sticks 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?