Alavi

Mathematics

Learner's Book

2

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Introduction

The Primary Mathematics brings together the world-class Cambridge Primary mathematics curriculum from Cambridge International Examinations. It is an innovative combination of curriculum and resources designed to support teachers and learners to success in primary mathematics through best-practice international maths teaching and a problem-solving approach.

The Cambridge curriculum is dedicated to helping schools develop learners who are confident, responsible, reflective, innovative and engaged. To this end, the textbooks provide support based on pedagogical practice found in successful schools around the world. This series is arranged to ensure that the curriculum is covered whilst allowing teachers to use a flexible approach.

Table of Contents

CHAPTER

1

What learners will learn and reinforce

The activities in this chapter give learners practice in the following topics:

Topic	In this topic, learners will:
1.1. Shapes are everywhere	identify the shapes and their sides and corners.
1.2. What time it is?	tell the time.
1.3. Number pattern	identify odd and even numbers.
1.4. Skip counting	practise skip counting.
1.5. Make 10	identify different ways to make 10.

Word bank

1	shape	2	corner	3	side	4	circle	5	square
6	rectangle	7	pentagon	8	hexagon	9	triangle	10	long hand
11	short hand	12	clock	13	o'clock	14	half past	15	hour
16	mintue	17	odd number	18	even number	19	count by	20	2s
21	5s	22	10s	23	plus	24	equal		

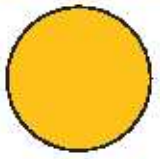
1.1. Shapes are everywhere

You will need: Resource 1.

Remember

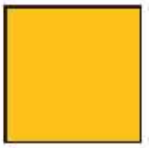
Shapes are all around you – at home, at school, in the park, all over the world!

Complete the sentences in each box. The first one has been done for you.



This is a ...circle... . It has ...1... side and ...0... corners.

This is a ..... . It has ..... sides and ..... corners.



This is a ..... . It has ..... sides and ..... corners.

This is a ..... . It has ..... sides and ..... corners.

This is a ..... . It has ..... sides and ..... corners.

This is a ..... . It has ..... sides and ..... corners.

Now look around you. Find one of each of these shapes in the room. Draw it on the recording sheet and write down where you found it. Just draw one of each shape. If there isn't a matching shape, try looking in other rooms or outside. Talk about the shapes you have found.

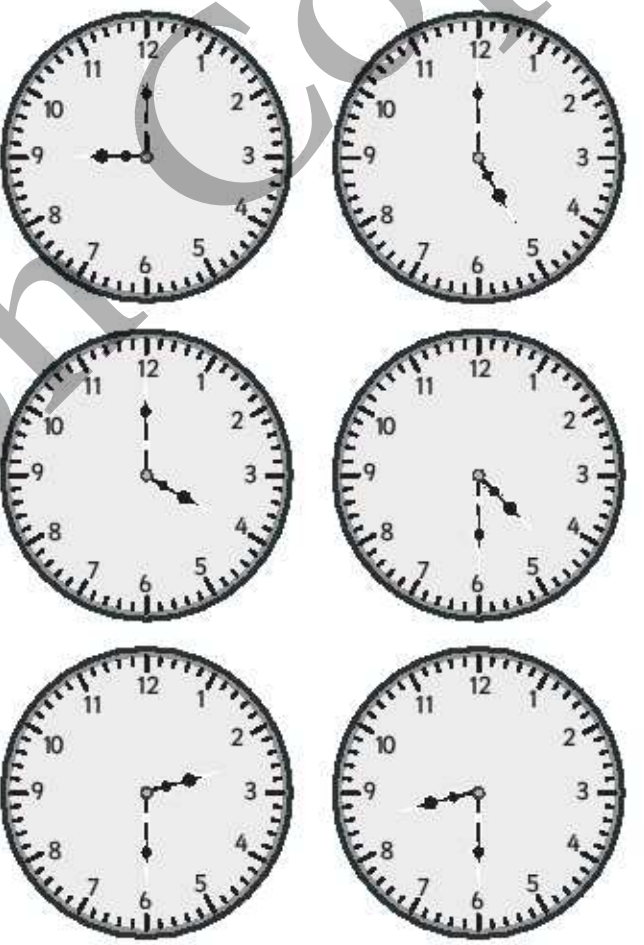
1.2. What time is it?

Remember

The long hand points to 12 for o'clock and 6 for half past.

You will need: counters (2 colours), a paperclip and pencil to use the spinner.

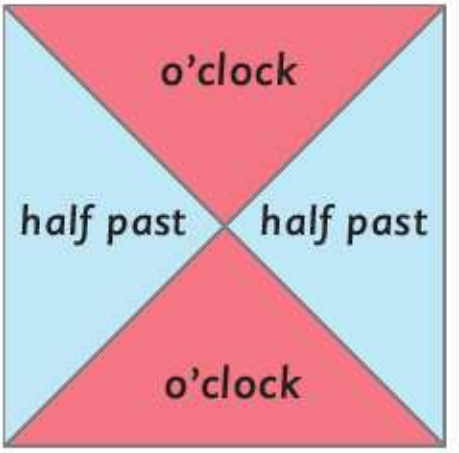
This is a game for two players. Take turns to spin the spinner. Choose a clock with a matching time.
Tell your partner the time on the clock.
If you get the time right, put one of your counters on the clock.
The first person to get four clocks in a line is the winner.

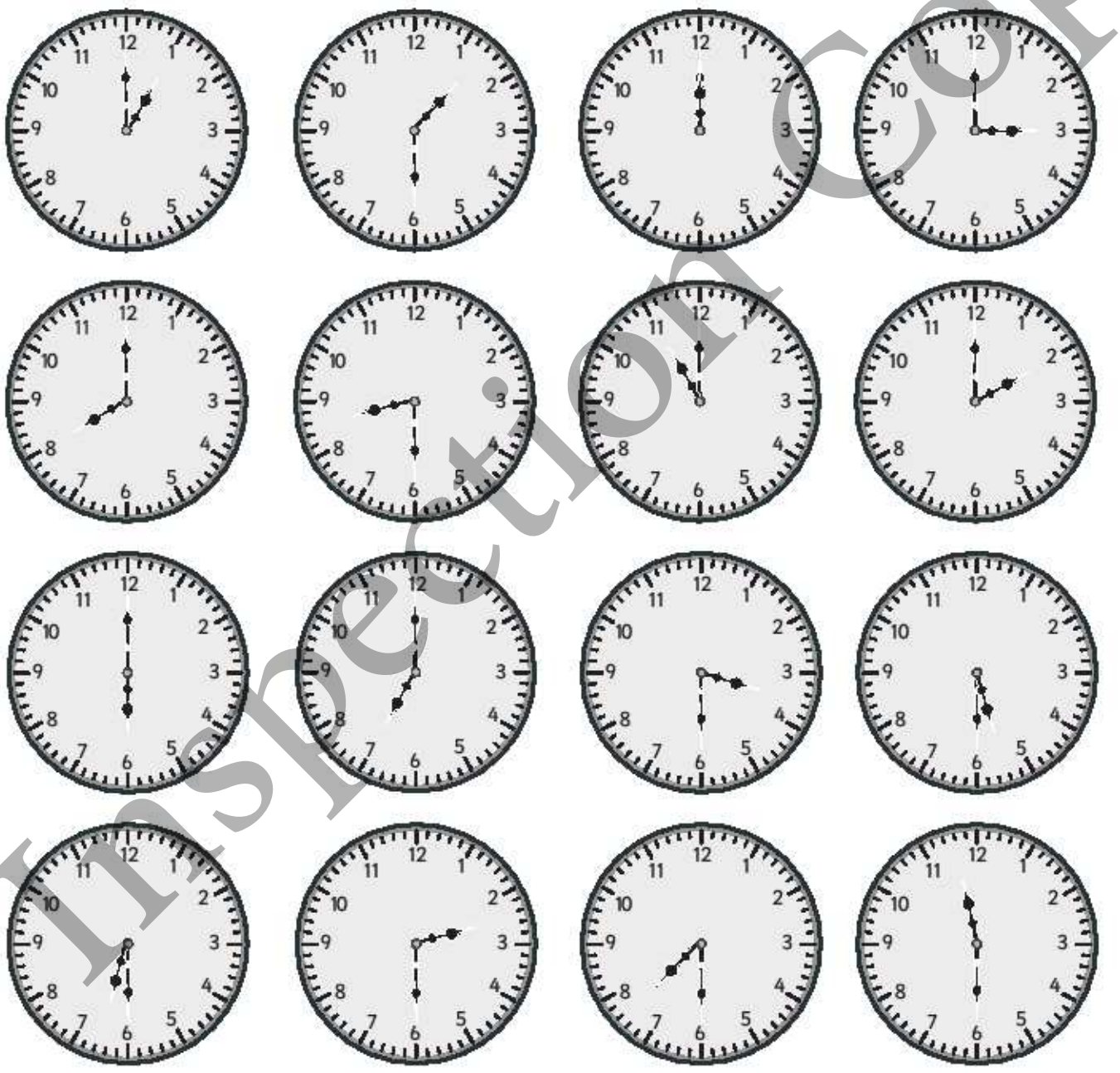


Challenge:

Play the game again. Change the rules.
Cover your partner's counter, take off one of their counters or change the rules in some other way.

Hint: Look at the counters already on the gameboard to help decide where to put the next counter.



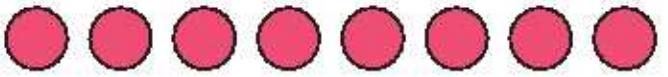


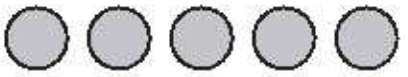
1.3. Number patterns

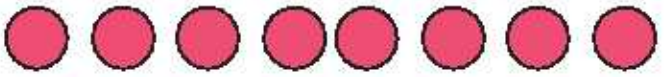
Remember

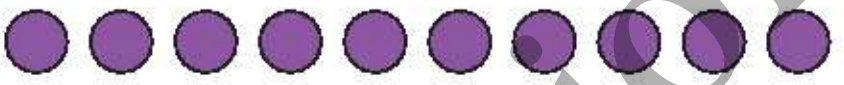
Even numbers make pairs. Odd numbers have one left over.

Count the number of circles and decide if it is an even number or an odd number.

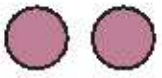
Ex  ....8.... even odd

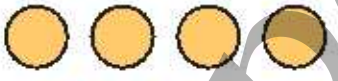
1  ..... even odd

2  ..... even odd

3  ..... even odd

4  ..... even odd

5  ..... even odd

6  ..... even odd

7  ..... even odd

8  ..... even odd

9  ..... even odd

10  ..... even odd

1.4. Skip counting

How many eyes? Count by 2s. Write the numbers.




2 | 4 | 6 | 8




10 | 12 | |




| | | |



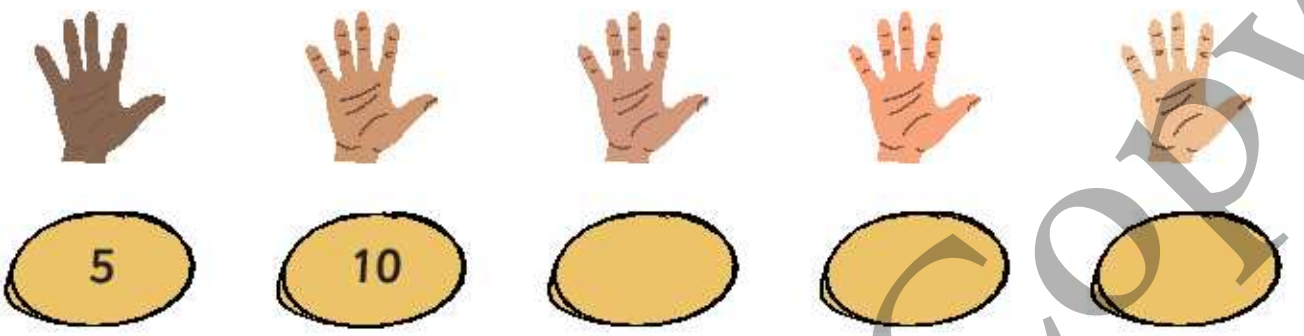

| | | |


eyes

How many

1) How many fingers?

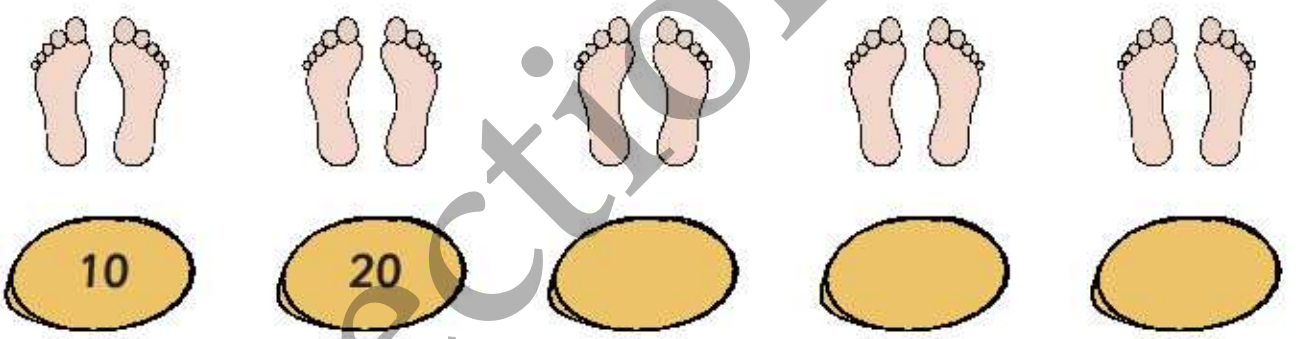
Count by 5s. Write the numbers.



_____ fingers

2) How many toes?

Count by 10s. Write the numbers.



_____ toes

Problem Solving: Critical Thinking

Count the toes by 5s.

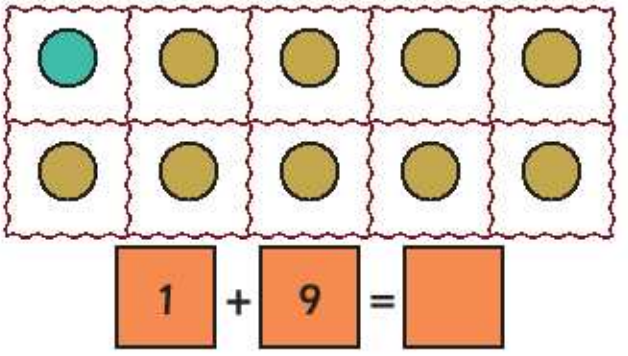
Do you get a different answer? Why or why not?

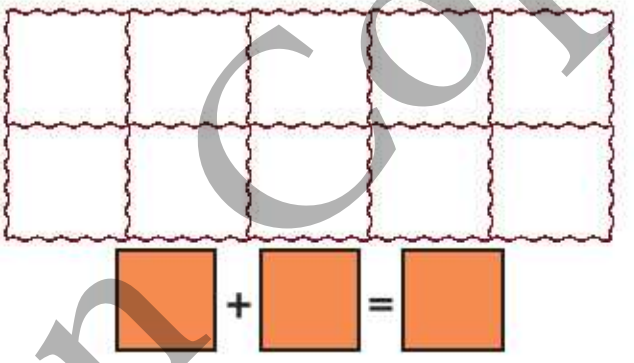
1.5. Make 10

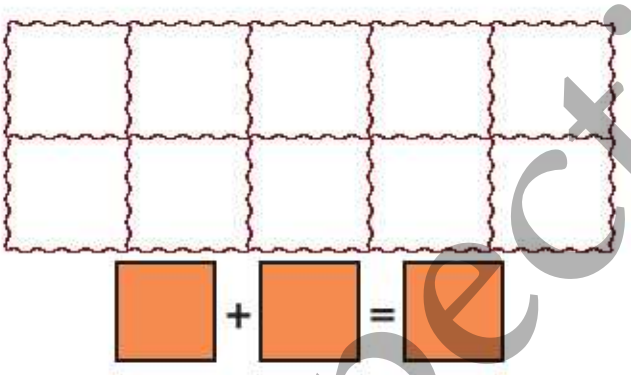
Use counters to make 10. Make 10 in a different way each time. Draw and colour your counters in the squares.

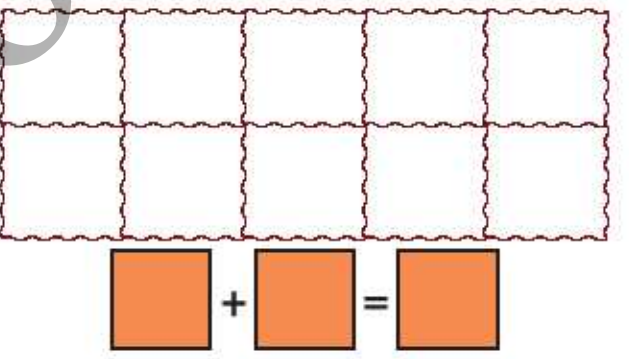
You will need: counters in two different colours and colouring pencils.

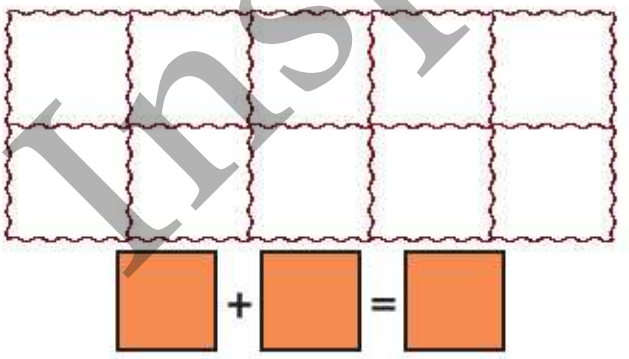
Hint: 9 + 1 and 1 + 9 are two ways of making 10.

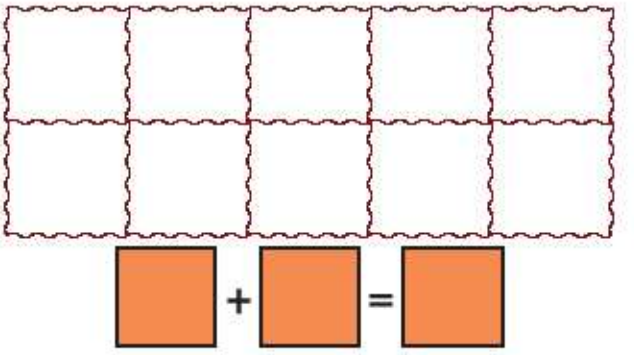












Number pairs to 10

Remember

When you are thinking about number pairs to 10, it doesn't matter which order you write the numbers, they are the same pair.

Find all the number pairs for 10.

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

Cross out each number as you use it. Write each number pair twice in the table, just like 0 and 10. Two have already been done for you.

0 + 10 = 10				
10 + 0 = 10				

Which number could you not use? Write down the number bond for it.

☐ + ☐ = 10

Oh no! Gremlins have been here and taken some numbers.

Write in the pairs that add to 10. Make sure they all look different.

2 + 8 = 10			4 + ◯ = 10	
	3 + ◯ = 10	6 + ◯ = 10		9 + ◯ = 10

CHAPTER

2

What learners will learn and reinforce

The activities in this chapter give learners practice in the following topics:

Topic	In this topic, learners will:
2.1. Tens and ones	understand that two-digit numbers are made up of tens and ones.
2.2. How many?	count numbers to 100.
2.3. Order numbers to 100	identify which numbers comes after/ before/ between a given number.
2.4. Explore addition	practise solving addition problems.
2.5. Explore subtraction	practise solving subtraction problems.

Word bank

1	tens	2	ones	3	1-100 numbers	4	come after	5	come before
6	come between	7	solve	8	problem	9	more	10	in all
11	is left	12	minus						

2.1. Tens and ones

Remember

Two digit numbers are made up of tens and ones.

Write how many tens.

Write the number.

5 tens, 50

tens,

tens,

tens,

tens,

tens,

tens,

tens,

Which two tens numbers are missing?

Number pairs for 100

Find all the pairs of these numbers that add to 100.

Cross out each number as you use it. Write each number pair twice in the table, just like 0 and 100. Two have already been done for you.

0 + 100 = 100				
100 + 0 = 100				

Which number could you not use? Write down the number bond for it.

☐ + ☐ = 100

Oh no! The gremlins are back!

Write the pairs that equal 100. Make sure they all look different.

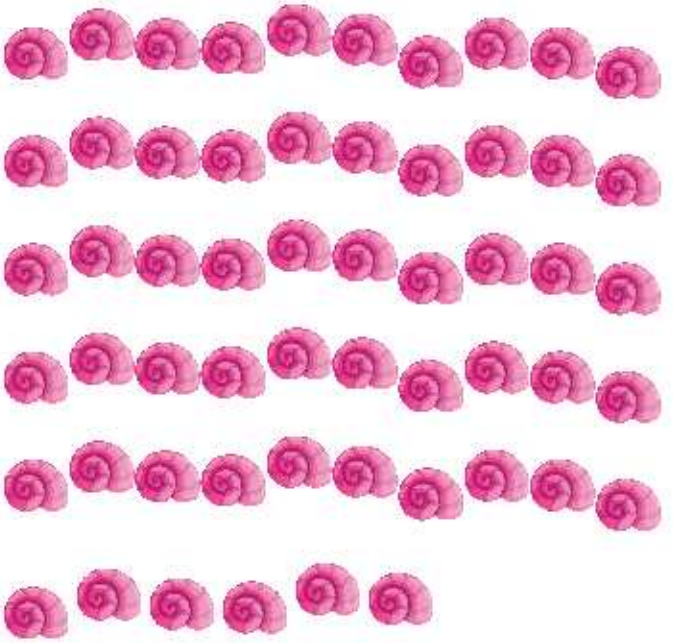


20 + 80 = 100		
	30 + ◯ = 100	60 + ◯ = 100

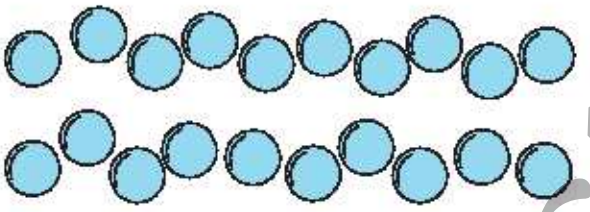

40 + ◯ = 100	
	70 + ◯ = 100

2.2. How many?

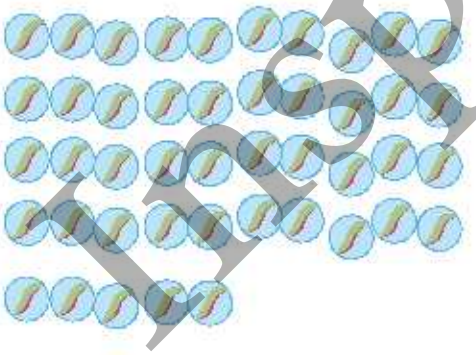
Count how many shells there are.



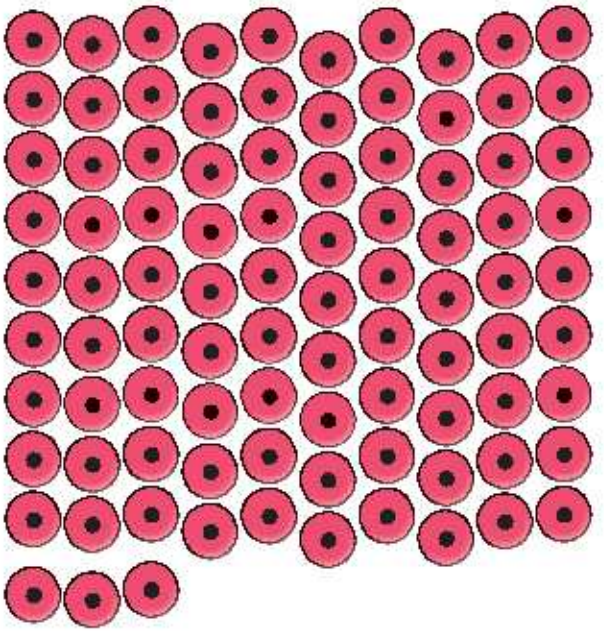
How many counters are there?



How many marbles can you find?



Count the number of beads.



Use a 100 square to help you.

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

Draw 23 of something.

2.3. Order numbers to 100

Write the number that comes after.

a) 82	b) 39	c) 71 .....
d) 68	e) 42	f) 94 .....

Write the number that comes before.

a) 20	b) 57	c) 88
d) 65	e) 42	f) 79

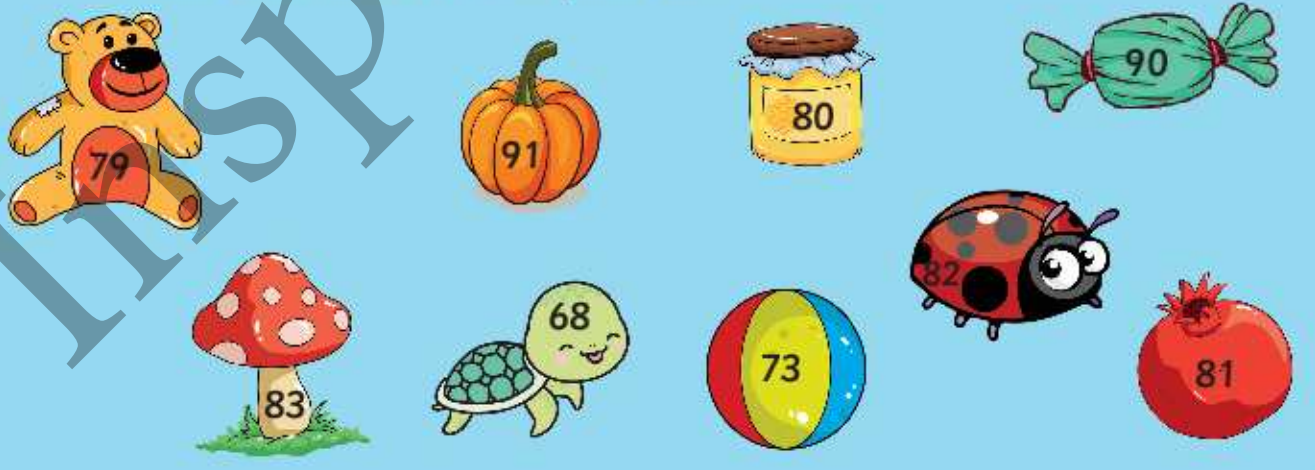
Write the numbers that come between.

a) 68 ..... , ... , 71	b) 87 ..... , ... , 90
c) 49 ..... , ... , 52	d) 75, 76 ..... , ... , 79

Problem Solving: Critical Thinking

Ali picked three of these stickers. They were odd numbers between 77 and 85.

Circle the stickers he picked.



Write the missing numbers.

1	2	3	4					9	
	12				16				20
				25				29	
		33							40
41						48			
			54						
	62				66				
		73						79	
81						87			
				95					100

Talk about 87. (Use before, after and between)

2.4. Explore addition

Solve each problem.

You can use ⬭.

1) There are 3  .

2 more  come.

How many in all?

.....3..... and .....2..... is.....5..... .

2) There are 6  .

2 more  come.

How many in all?

..... and ..... is..... .

3) There are 5  .

4 more  come.

How many in all?

..... and ..... is..... .

4) There are 5 brothers and 3 sisters.

How many in all?

..... and ..... is..... .

Problem Solving: Critical Thinking

Draw a picture. Tell a math story about the picture.

2.5. Explore subtraction

Use ⬭. Show the story.

Write the number sentence.

1) There are 8  .

6  fly away.

How many are left?

8 - 6 = 2 are left.

2) There are 6  .

6  slide away.

How many are left?

..... - ..... = ... are left.

3) There are 7  .

4  run away.

How many are left?

..... - ..... = ... are left.

4) There are 9  .

3  run away.

How many are left?

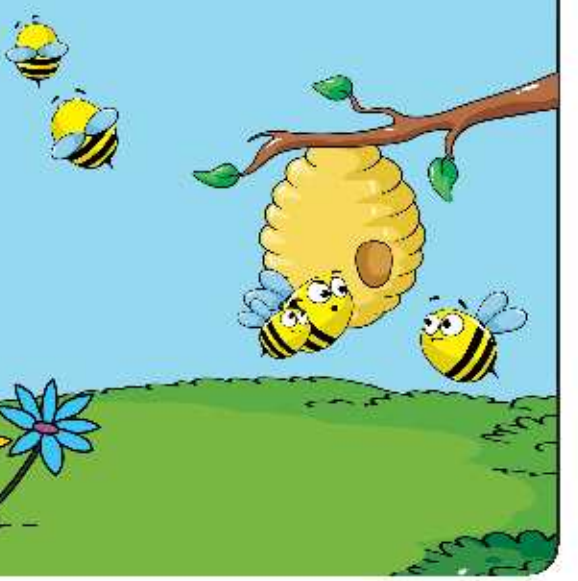
..... - ..... = ... are left.

Problem Solving: Critical Thinking

Tell a math story about the picture.

Write the number sentence.

..... - ..... = ...



CHAPTER

3

What learners will learn and reinforce

The activities in this chapter give learners practice in the following topics:

Topic	In this topic, learners will:
3.1. Positions	recognize ordinal numbers.
3.2. Less than, greater than	practise comparing 2-digit numbers.
3.3. Calculation	practise adding and subtracting numbers.
3.4. Find the difference	find the difference between two numbers.
3.5. Number stories	make up stories to go with a given number sentence.

Word bank

1	the first	2	the second	3	the third	4	the fourth	5	the fifth
6	less than	7	greater than	8	equivalent to	9	difference		

3.1. Positions

Remember

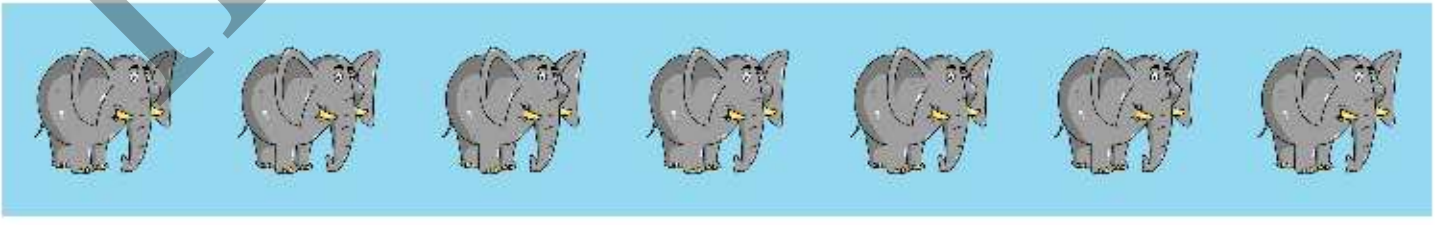
Ordinal numbers tell you the position.

Draw a ring around the 1st horse.

Draw a ring around the 2nd bird.

Draw a ring around the 3rd fish.

Draw a ring around the 4th chicken.



Draw a ring around the 5th elephant.

Queue for the waterhole

Where is the  in the queue?

Who is between the  and the  ?

Where is the  in the queue?

Who is between the  and the  ?

Where is the  in the queue?

Who is between the  and the  ?

Where is the  in the queue?

3.2. Less than, greater than

Remember

When comparing two-digit numbers, look first at the tens digit to find which number is higher or lower. If they are the same, look at the ones digit.

You will need: Resource 2, a paperclip and pencil to use the spinner.

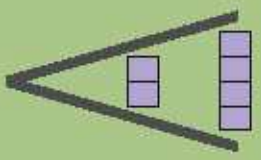
Shuffle the digit cards.

Turn over the top four cards to make two two-digit numbers. Spin the spinner.

Use the numbers and the symbol on the spinner to write a number sentence.

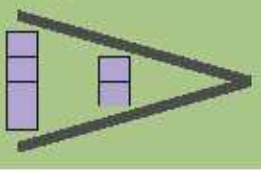
Look and Learn

- is less than



- equivalent to

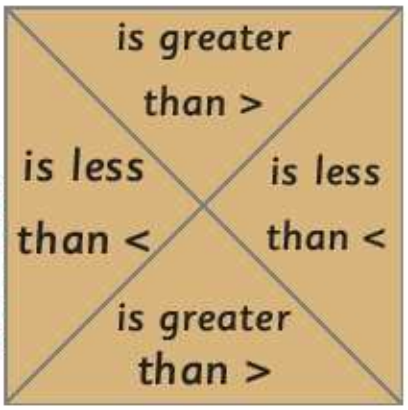
- is more than (or is greater than)



For example:

The first number sentence has been done for you. Write nine more.

23 < 52				



Juliet used all the digit cards below to make some number sentences.
But the cards were blown off the table!
What could her number sentence have been?

Remember to use all the cards, especially the < and > .
How many different sets of number sentences can you find?

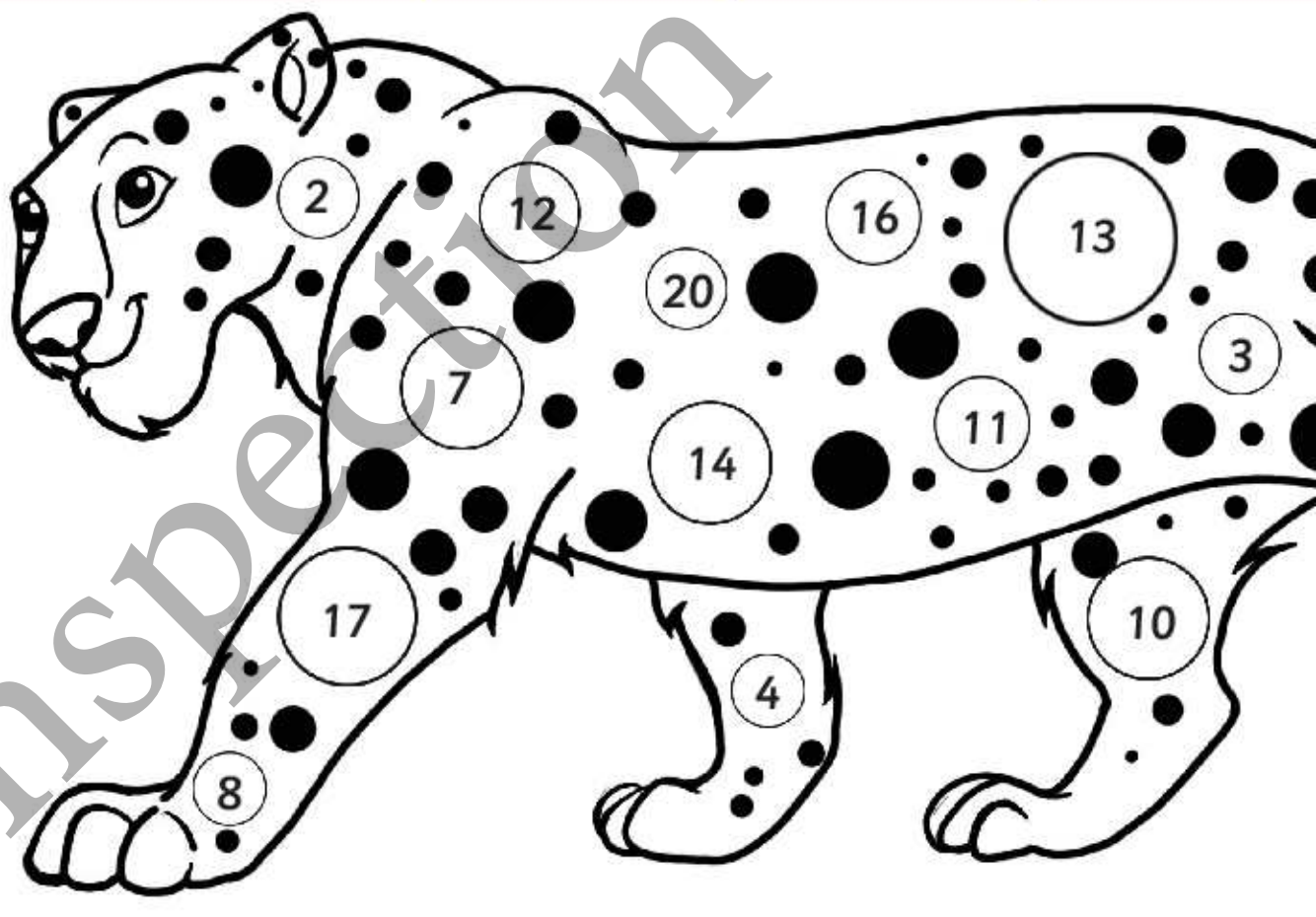
3.3. Calculation

Remember

You can add numbers in any order.

You will need: a 1-6 dice or Resource 3, a selection of counters (1 for each player and some to cover the spots).

START	7 + 6	20 - 9	14 + 3
16 - 12			
10 - 8			
17 - 14			
9 + 11	13 - 7	16 - 4	10 - 2

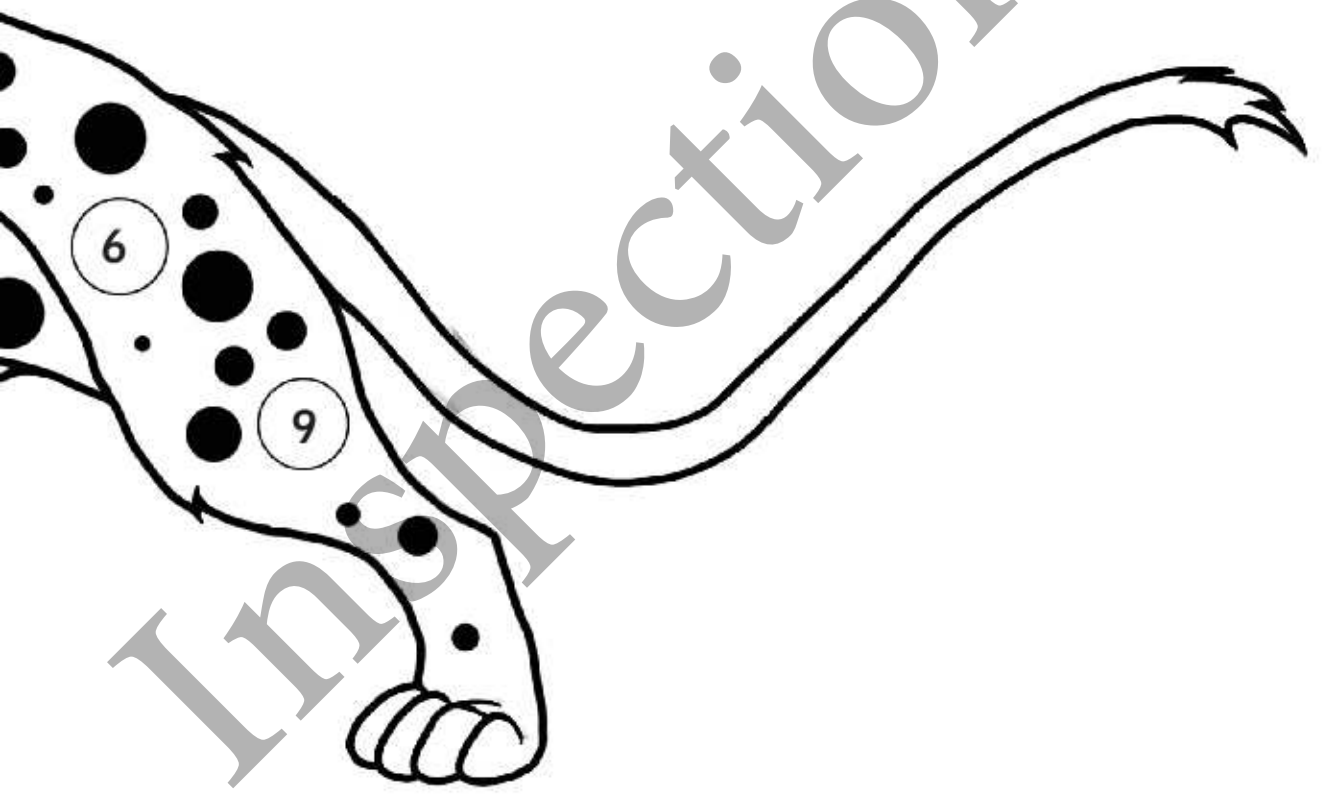


You can play this game on your own or with a friend. Take turns to throw the dice and move on that number of spaces. Complete each calculation. Put a counter on the spot on the leopard that matches your answer.

Some spots may be the answer to more than one calculation. If you land on a paw print you can choose any number to cover.

Who will cover the last spot on the leopard?

	8 + 2	12 + 4	6 + 7	20 - 11



	17 - 3	11 + 9	🐾	13 - 6	20 - 11

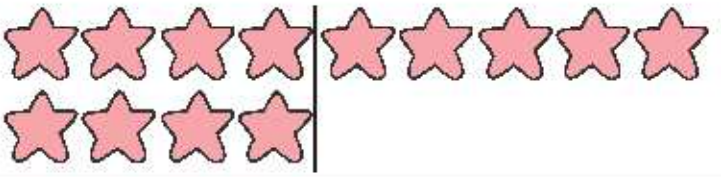
🐾
3 + 14
2 + 8
4 + 12

3.4. Find the difference

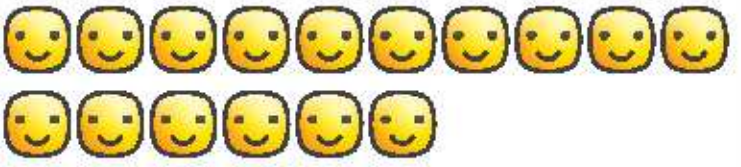
Find the difference between each set of objects below.

Write the matching number sentence.

A



B



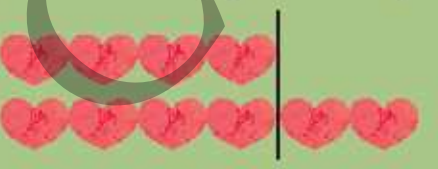
C

D

E

Look and Learn

difference: how many more is needed to make the smaller amount the same as the larger amount, for example:



6 – 4 = 2.

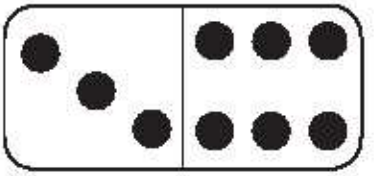
The difference between 6 and 4 is 2.

Use a straight edge to make a line at the end of the smaller row. Then count how many objects come after the line in the longer row.

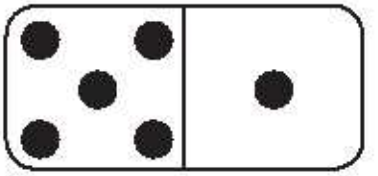
Draw two different pictures to show a difference of four.

Remember

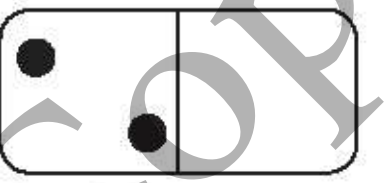
Find the difference by counting on from the smaller number or counting back from the larger number.



The difference is 3



The difference is 4



The difference is 2

The difference is .....

The difference is .....

The difference is .....

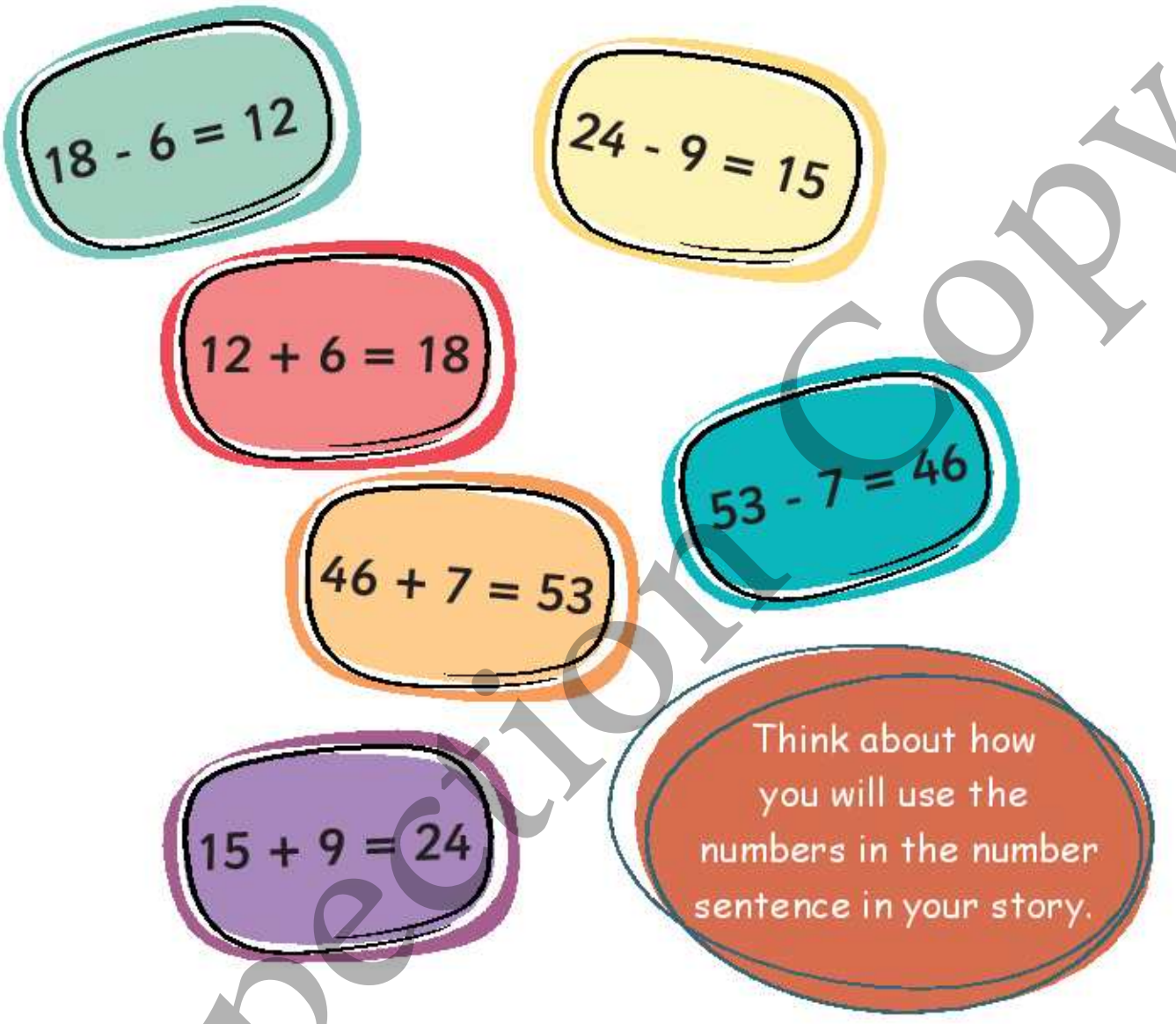
The difference is .....

The difference is .....

The difference is .....

3.5. Number stories

Make up a story to go with one of these number sentences.



Tell your story to a partner.

Can they tell you which number sentence you used?

Choose a number sentence and tell a story.

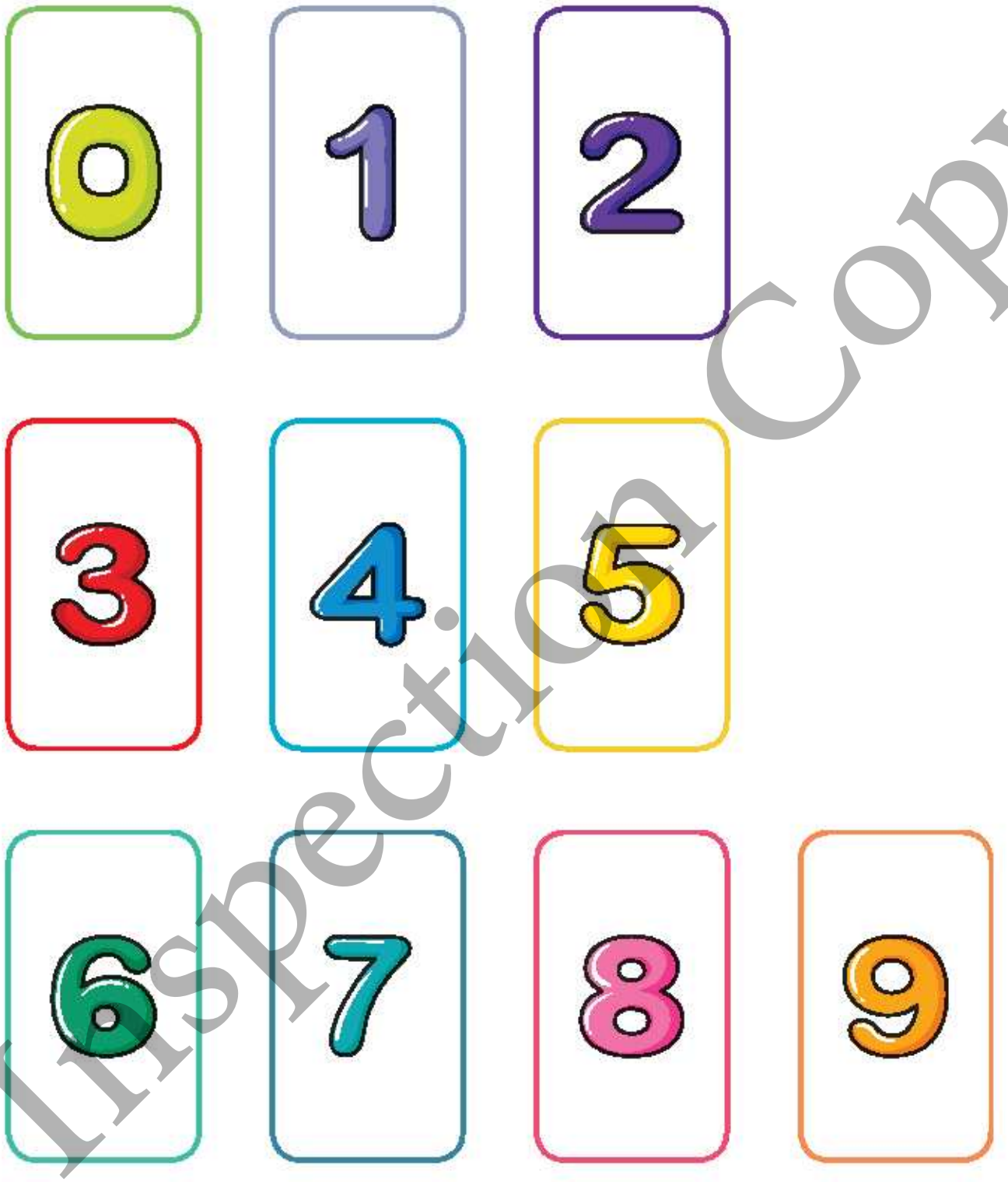
Your partner then tells a story to undo your number sentence.

For example, if the story is about 15 + 9 = 24, the undoing story would be about 24 - 9 = 15.

Resource 1: Recording sheet

	This is a ..... . I found it ..... .
	This is a ..... . I found it ..... .
	This is a ..... . I found it ..... .
	This is a ..... . I found it ..... .
	This is a ..... . I found it ..... .
	This is a ..... . I found it ..... .

Resource 2: 0 – 9 digit cards



Resource 3: Dice templates

Cut out the nets; taking care not to cut off the tabs. Fold along all the lines to make cubes or a pyramid. Tuck the tabs inside and glue them in place, to hold the dice together.