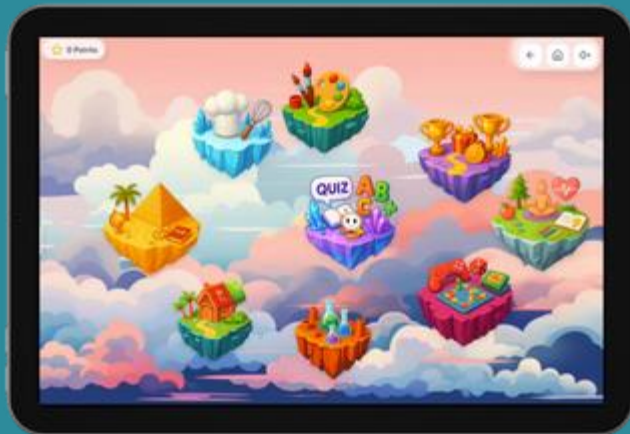




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Introduction to Subtraction - Year 1

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SUBTRACTION

MEANS

TAKE AWAY

$$8 - 3 = 5$$



1 START WITH 8



2 TAKE AWAY 3



3 5 REMAIN



Subtraction helps us
find how many are left.

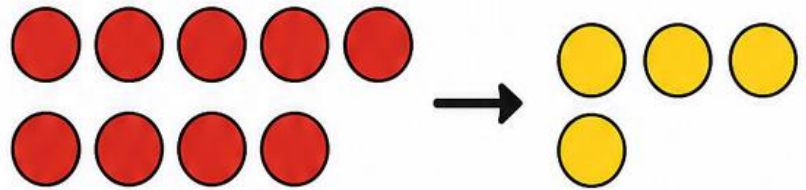


CHOOSE A



SUBTRACTION STRATEGY

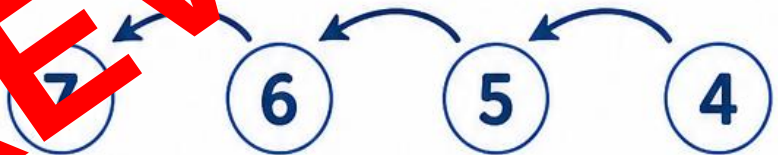
**USE
OBJECTS**



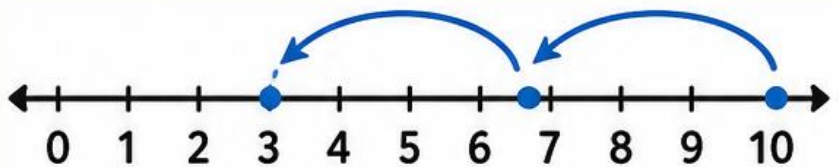
**DRAW AND
CROSS OUT**



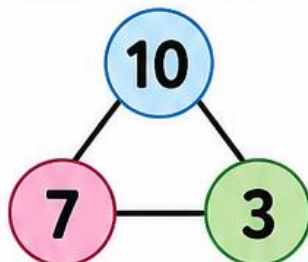
COUNT BACK



**USE A
NUMBER LINE**



**USE A
KNOWN FACT**



$$7 + 3 = 10$$

$$10 - 7 = 3$$



CATERPILLAR COUNT-BACK CARDS



$10 - 1 = \square$



$10 - 3 = \square$



$9 - 2 = \square$



$9 - 5 = \square$



$8 - 3 = \square$



$8 - 6 = \square$

CATERPILLAR COUNT-BACK CARDS

PAGE B

$$7 - 2 =$$



$$7 - 5 =$$



$$6 - 1 =$$



$$6 - 4 =$$



$$5 - 2 =$$



$$4 - 3 =$$



PREVIEW

RAINBOW RACE SUBTRACTION



START

1 **5-1**

2 **6-2**

3 **7-3**

4 **8-4**

5 **9-5**

6 **10-6**

7 **6-1**

8 **7-2**

9 **8-3**

10 **9-4**

11 **10-5**

12 ROLL AGAIN

13 **5-2**

14 **6-3**

15 **7-4**

16 **8-5**

17 **9-6**

18 **MISS A TURN**

19 **10-7**

20 **MOVE AHEAD 1**

21 **5-1**

22 **6-2**

23 **7-3**

24

FINISH



Roll one die. Move.
Solve the subtraction.
A correct answer keeps your place.
First to **FINISH** wins.



RAINBOW RACE RECORDING SHEET

Name: _____

	SUBTRACTION	ANSWER
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

PREVIEW

Which strategy helped you most?

WORKSHEET 1: COUNT-BACK CRITTERS

Name: _____



Count back to solve each subtraction problem.



①

$$9 - 2$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○

②

$$8 - 3$$

○ ○ ○ ○ ○ ○ ○ ○

③

$$10 - 4$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

④

$$7 - 5$$

○ ○ ○ ○ ○ ○ ○ ○

⑤

$$12 - 3$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑥

$$11 - 4$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑦

$$15 - 2$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑧

$$14 - 5$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑨

$$13 - 6$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑩

$$16 - 7$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑪

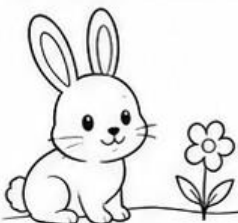
$$18 - 8$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

⑫

$$20 - 9$$

○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○ ○ ○ ○



WORKSHEET 1: COUNT-BACK CRITTERS

ANSWERS



Count back to solve each subtraction problem.



① $9 - 2$
○○○○○○○○○○
7

② $8 - 3$
○○○○○○○○
5

③ $10 - 4$
○○○○○○○○○○○○
6

④ $7 - 5$
○○○○○○○○
2

⑤ $12 - 3$
○○○○○○○○○○○○○○
9

⑥ $11 - 4$
○○○○○○○○○○
7

⑦ $15 - 2$
○○○○○○○○○○○○○○○○
13

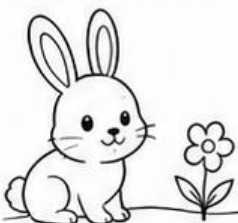
⑧ $14 - 5$
○○○○○○○○○○○○○○○○
9

⑨ $13 - 6$
○○○○○○○○○○○○○○
7

⑩ $16 - 7$
○○○○○○○○○○○○○○○○
9

⑪ $18 - 8$
○○○○○○○○○○○○○○○○
10

⑫ $20 - 9$
○○○○○○○○○○○○○○○○
11

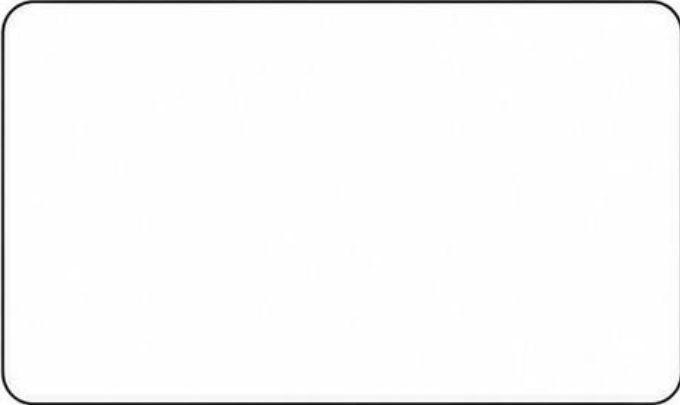


WORKSHEET 2: PICTURE IT, TAKE IT AWAY - WITHIN 10

Name: _____



Draw the starting amount. Cross out what is taken away. Write the answer.



$$6 - 2 = \square$$



$$8 - 3 = \square$$



$$9 - 5 = \square$$



$$10 - 4 = \square$$

PREVIEW

WORKSHEET 2: PICTURE IT, TAKE IT AWAY - WITHIN 10

ANSWERS _____

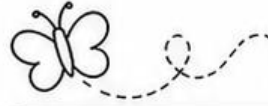


Draw the starting amount. Cross out what is taken away. Write the answer.



START 6 -
TAKE AWAY 2 -
4 REMAIN

$$6 - 2 = \boxed{4}$$



START 8 -
TAKE AWAY 3 -
5 REMAIN

$$8 - 3 = \boxed{5}$$



START 9 -
TAKE AWAY 5 -
4 REMAIN

$$9 - 5 = \boxed{4}$$



START 10 -
TAKE AWAY 4 -
6 REMAIN

$$10 - 4 = \boxed{6}$$

PREVIEW

WORKSHEET 2: PICTURE IT, TAKE IT AWAY - WITHIN 20

Name: _____



Draw the starting amount. Cross out what is taken away. Write the answer.



$$12 - 5 =$$



$$14 - 6 =$$



$$15 - 7 =$$



$$18 - 9 =$$

PREVIEW



WORKSHEET 2: PICTURE IT, TAKE IT AWAY - WITHIN 20

ANSWERS _____



Draw the starting amount. Cross out what is taken away. Write the answer.



START 12 -
TAKE AWAY 5 -
7 REMAIN

$$12 - 5 = 7$$



START 14 -
TAKE AWAY 6 -
8 REMAIN

$$14 - 6 = 8$$



START 15 -
TAKE AWAY 7 -
8 REMAIN

$$15 - 7 = 8$$



START 18 -
TAKE AWAY 9 -
9 REMAIN

$$18 - 9 = 9$$





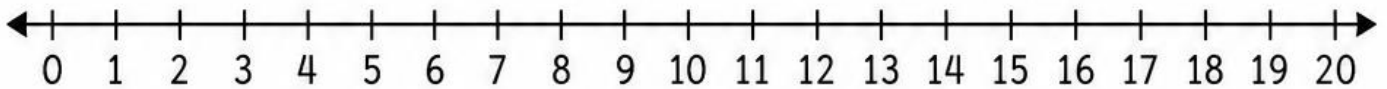
WORKSHEET 3: NUMBER-LINE JUMPS



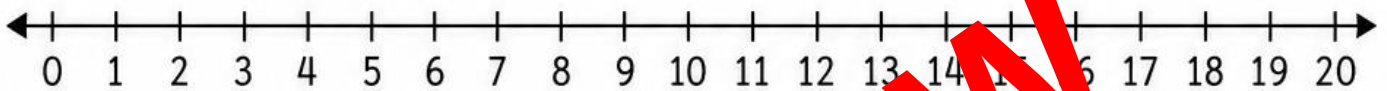
Name: _____

Start at the first number. Jump left. Write where you land.

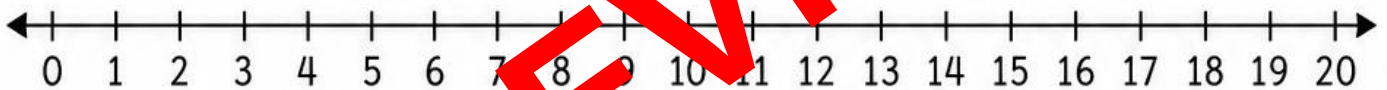
$$9 - 4 = \boxed{}$$



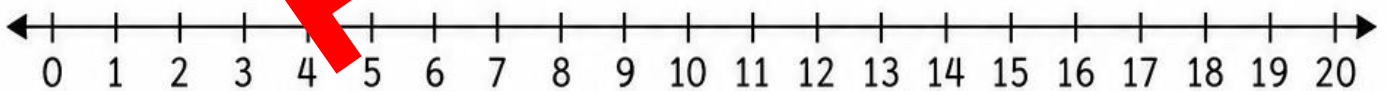
$$12 - 5 = \boxed{}$$



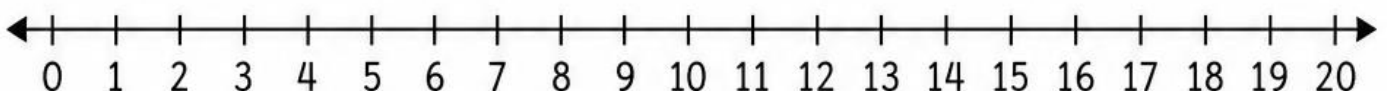
$$14 - 6 = \boxed{}$$



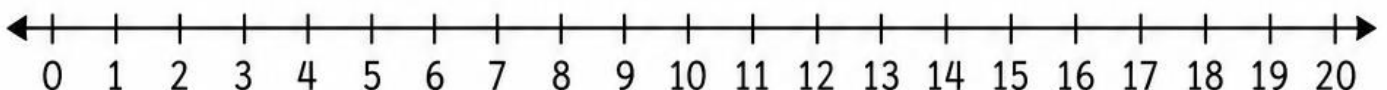
$$15 - 7 = \boxed{}$$



$$17 - 8 = \boxed{}$$



$$20 - 9 = \boxed{}$$





WORKSHEET 3: NUMBER-LINE JUMPS

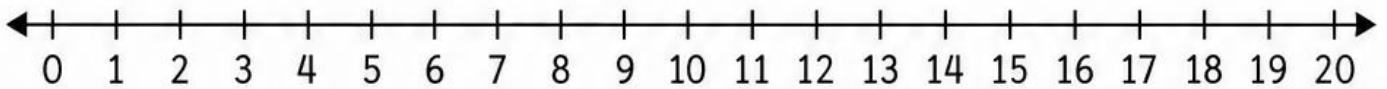


ANSWERS: _____

Start at the first number. Jump left. Write where you land.

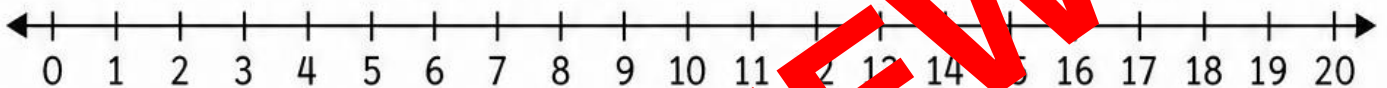
$$9 - 4 = \boxed{5}$$

START 9 - JUMP BACK 4 - LAND ON 5



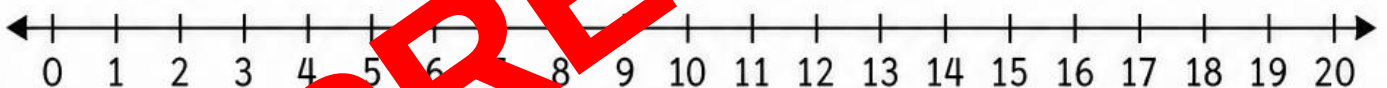
$$12 - 5 = \boxed{7}$$

START 12 - JUMP BACK 5 - LAND ON 7



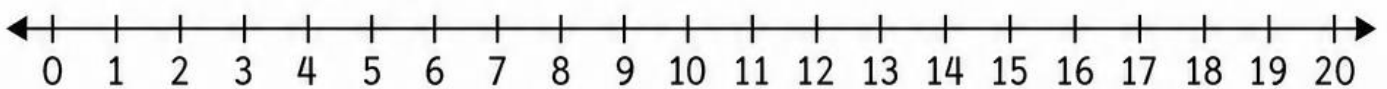
$$14 - 6 = \boxed{8}$$

START 14 - JUMP BACK 6 - LAND ON 8



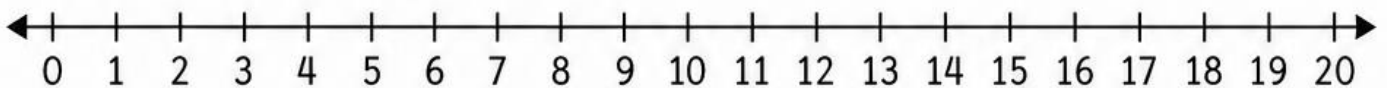
$$15 - 7 = \boxed{8}$$

START 15 - JUMP BACK 7 - LAND ON 8



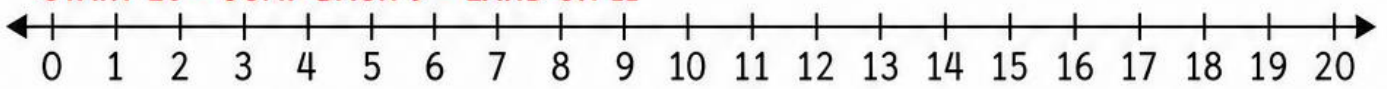
$$17 - 8 = \boxed{9}$$

START 17 - JUMP BACK 8 - LAND ON 9



$$20 - 9 = \boxed{11}$$

START 20 - JUMP BACK 9 - LAND ON 11



WORKSHEET 4: RAINBOW TO TEN

Name: _____

Use a make-ten fact to solve each subtraction.

Write the addition fact that helped: $\underline{\quad} + \underline{\quad} = 10$

$$10 - 1 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 6 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 2 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 7 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 3 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 8 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 4 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 9 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 5 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$

$$10 - 10 = \square$$

$$\underline{\quad} + \underline{\quad} = 10$$



WORKSHEET 4: RAINBOW TO TEN

Name: ANSWERS

Use a make-ten fact to solve each subtraction.
Write the addition fact that helped: 7 + 3 = 10

$$10 - 1 = \boxed{9}$$

$$\underline{9} + \underline{1} = 10$$

$$10 - 6 = \boxed{4}$$

$$\underline{4} + \underline{6} = 10$$

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

$$\underline{8} + \underline{2} = 10$$

$$10 - 7 = \boxed{3}$$

$$\underline{3} + \underline{7} = 10$$

$$10 - 3 = \boxed{7}$$

$$\underline{7} + \underline{3} = 10$$

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

$$\underline{2} + \underline{8} = 10$$

$$10 - 4 = \boxed{6}$$

$$\underline{6} + \underline{4} = 10$$

$$10 - 9 = \boxed{1}$$

$$\underline{1} + \underline{9} = 10$$

$$10 - 5 = \boxed{5}$$

$$\underline{5} + \underline{5} = 10$$

$$10 - 10 = \boxed{0}$$

$$\underline{0} + \underline{10} = 10$$



WORKSHEET 5: DOUBLE SCOOP SUBTRACTION



Name: _____



Use a doubles fact to help solve each subtraction.



Choose one:

I know ____ + ____ = ____, so ____ - ____ = ____.



$4 - 2 = \square$



$6 - 3 = \square$



$8 - 4 = \square$



$10 - 5 = \square$



$12 - 6 = \square$



$14 - 7 = \square$



$16 - 8 = \square$



$18 - 9 = \square$



WORKSHEET 5: DOUBLE SCOOP SUBTRACTION



Name: **ANSWERS**



Use a doubles fact to help solve each subtraction.



Choose one:

I know 7 + 7 = 14, so 14 - 7 = 7.



$$4 - 2 =$$

2



$$6 - 3 =$$

3



$$8 - 4 =$$

4



$$10 - 5 =$$

5



$$12 - 6 =$$

6



$$14 - 7 =$$

7



$$16 - 8 =$$

8



$$18 - 9 =$$

9





ASSESSMENT: SUBTRACTION TOOLBOX - PART A



Name: _____

Date: _____

1 SOLVE

1. $8 - 3 = \square$

2. $10 - 6 = \square$

3. $12 - 4 = \square$

4. $14 - 5 = \square$

5. $16 - 7 = \square$

6. $20 - 9 = \square$

2 SHOW A STRATEGY

1. $9 - 4$

2. $13 - 6$

3 CHOOSE

Which strategy would help you solve $15 - 8$?



Objects



Draw



Count back



Number line



Known fact

Students may choose more than one.



ASSESSMENT: SUBTRACTION TOOLBOX - PART A



Name: ANSWERS

Date: _____

1 SOLVE

1. $8 - 3 =$ 5

2. $10 - 6 =$ 4

3. $12 - 4 =$ 8

4. $14 - 5 =$ 9

5. $16 - 7 =$ 9

6. $20 - 9 =$ 11

2 SHOW A STRATEGY

1. $9 - 4$

$9 - 4 = 5$

START 9 - TAKE AWAY 4 - 5 REMAIN

2. $13 - 6$

$13 - 6 = 7$

START 13 - TAKE AWAY 6 - 7 REMAIN

3 CHOOSE

Which strategy would help you solve $15 - 8$?



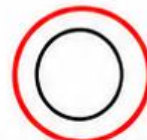
Objects



Draw



Count back



Number line



Known fact

Students may choose more than one.

ASSESSMENT: SUBTRACTION TOOLBOX - PART B

Name: _____

Date: _____



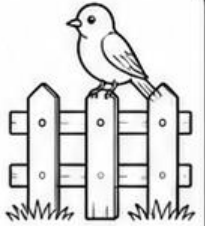
- 1** There were 11 shells.
Mia gave 4 away.
How many shells remained?



_____ - _____ = _____

Answer: _____

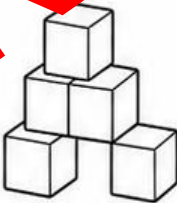
- 2** Fifteen birds sat on a fence.
Six flew away.
How many birds were left?



_____ - _____ = _____

Answer: _____

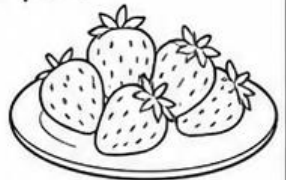
- 3** Noah had 18 blocks.
He packed 9 away.
How many blocks stayed out?



_____ - _____ = _____

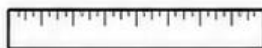
Answer: _____

- 4** Ten strawberries were on a plate.
Three were eaten.
How many remained?



_____ - _____ = _____

Answer: _____



ASSESSMENT: SUBTRACTION TOOLBOX - PART B

ANSWERS _____

Date: _____



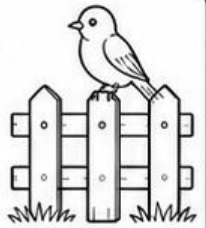
- 1** There were 11 shells.
Mia gave 4 away.
How many shells remained?



$$\underline{11} - \underline{4} = \underline{7}$$

Answer: 7 shells remained.

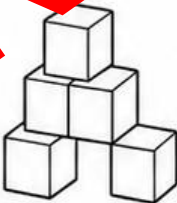
- 2** Fifteen birds sat on a fence.
Six flew away.
How many birds were left?



$$\underline{15} - \underline{6} = \underline{9}$$

Answer: 9 birds were left.

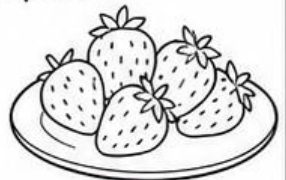
- 3** Noah had 18 blocks.
He packed 9 away.
How many blocks stayed out?



$$\underline{18} - \underline{9} = \underline{9}$$

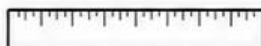
Answer: 9 blocks stayed out.

- 4** Ten strawberries were on a plate.
Three were eaten.
How many remained?



$$\underline{10} - \underline{3} = \underline{7}$$

Answer: 7 strawberries remained.



— INTRODUCTION TO SUBTRACTION RUBRIC —

CRITERIA	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
UNDERSTANDS TAKE AWAY	Identifies take away with substantial support.	Identifies take away in familiar examples.	Explains take away as making a group smaller.	Explains take away in varied representations.	Connects take away, difference and comparison.
SOLVES SUBTRACTION	Solves simple facts with substantial support.	Solves familiar facts with prompts.	Solves subtraction facts accurately.	Solves efficiently and checks answers.	Solves unfamiliar facts flexibly and accurately.
USES STRATEGIES	Uses one strategy with substantial support.	Uses a familiar strategy with prompts.	Chooses and uses suitable strategies (e.g. $10 - 8 = 2$).	Selects efficient strategies independently.	Compares strategies and justifies the best choice.
REPRESENTS THINKING	Shows thinking with substantial support.	Shows some steps using objects or drawings.	Represents thinking clearly.	Uses equations and models clearly.	Connects multiple representations and explains them.
SOLVES STORY PROBLEMS	Identifies key information with substantial support.	Solves familiar stories with prompts.	Solves one-step subtraction stories.	Solves and explains varied subtraction stories.	Creates, solves and explains accurate subtraction stories.

Introduction to Subtraction



Learning goal

We are learning to:

- explain subtraction as taking away
- read a subtraction sentence
- choose a strategy and check our answer



What is subtraction?

Subtraction means taking some away from a starting amount.

Then we find how many remain.

The group gets smaller.



Read a subtraction sentence

$$8 - 3 = 5$$

Start with 8.

Take away 3.

5 remain.

We read it as: eight minus three equals five.



Subtraction words

Listen for these clues:

subtract • minus • take away

fewer • difference • how many remain

Each clue can tell you that a group is getting smaller.



Choose a strategy

You can use:

- objects
- a drawing
- count back
- a number line
- a known fact
- the addition



Strategy 1 · Use objects

1. Make the starting amount.
2. Remove the amount being taken away.
3. Count what remains.

Keep the objects organised so they are easy to count.



Use objects · Worked example

$$9 - 4 = 5$$

Make 9 counters.

Take away 4 counters.

Count the 5 counters that remain.

Check: 5 is more than 4.



Your turn · Use objects

Solve $8 - 3$.

Make 8 objects.

Take away 3.

Count what remains.

What is your answer?



Answer

$$8 - 3 = 5$$

Start with 8.

Take away 3.

5 remain.



Strategy 2 · Draw and cross out

1. Draw the starting amount.
2. Cross out the amount being taken away.
3. Count the pictures that are not crossed out.
4. Write the subtraction sentence.



Draw it · Worked example

$$12 - 5 = 7$$

Draw 12 simple marks.

Cross out 5 marks.

Count the 7 marks that remain.

Check: $7 + 5 = 12$



Your turn · Draw it

Solve $10 - 6$.

Draw 10 quick marks.

Cross out 6.

How many remain?



Answer

$$10 - 6 = 4$$

10 was the starting amount.

6 were taken away.

4 remain.



Strategy 3 · Count back

Say the starting number.

Count back once for each one being taken away.

The number you land on is the answer.

Do not count the starting number as a jump.



Count back · Worked example

$$11 - 3 = 8$$

Start at 11.

Count back three numbers:

10, 9, 8.

Understand 8.



Your turn · Count back

Solve $9 - 4$.

Start at 9.

Count back four numbers.

Where do you land?



Answer

$$9 - 4 = 5$$

Count back: 8, 7, 6, 5.

You land on 5.



Strategy 4 · Number-line jumps

1. Find the starting number.
2. Jump left because the amount gets smaller.
3. Make one jump for each one taken away.
4. Read the number when you land.



Number line · Worked example

$$14 - 6 = 8$$

Start at 14.

Jump left 6 spaces.

Land on 8.

Check: $8 + 6 = 14$



Your turn · Number line

Solve $13 - 5$.

Start at 13.

Jump left 5 spaces.

Where do you land?



Answer

$$13 - 5 = 8$$

Start at 13.

Jump left 5 spaces.

Land on 8.



Strategy 5 · Use a fact family

Addition and subtraction are connected.

If $7 + 3 = 10$, then:

$$10 - 7 = 3$$

$$\text{and } 10 - 3 = 7$$

An addition fact can unlock a subtraction fact.



Known doubles fact

$$5 + 5 = 10$$

So:

$$10 - 5 = 5$$

When both numbers are the same, a doubles fact can help us subtract.



Rainbow-to-ten fact

$$7 + 3 = 10$$

So:

$$10 - 7 = 3$$

$$10 - 3 = 7$$

Think: Which number joins the smaller number to make 10?



Mixed practice

Choose a helpful strategy for each fact

1. $7 - 2 = \underline{\quad}$

2. $10 - 4 = \underline{\quad}$

3. $12 - 6 = \underline{\quad}$

4. $15 - 7 = \underline{\quad}$



Mixed-practice answers

1. $7 - 2 = 5$

2. $10 - 4 = 6$

3. $12 - 6 = 6$

4. $15 - 7 = 8$

Can you explain the strategy you chose for one fact?



Story problem

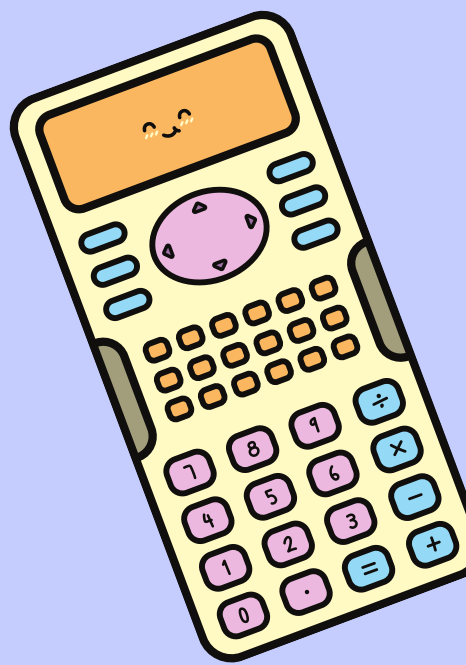
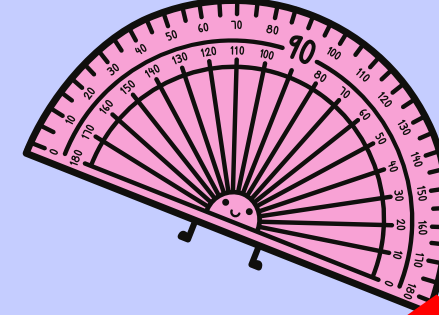
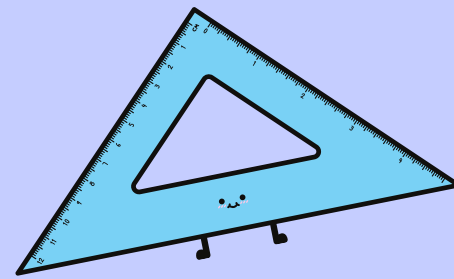
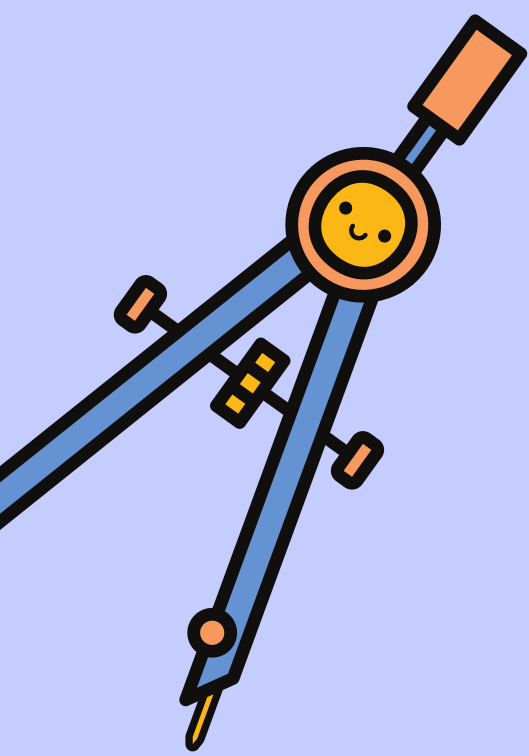
Fifteen birds sat in a tree. Six flew away.
How many birds remained?

Think: What is the starting amount? What is taken away?

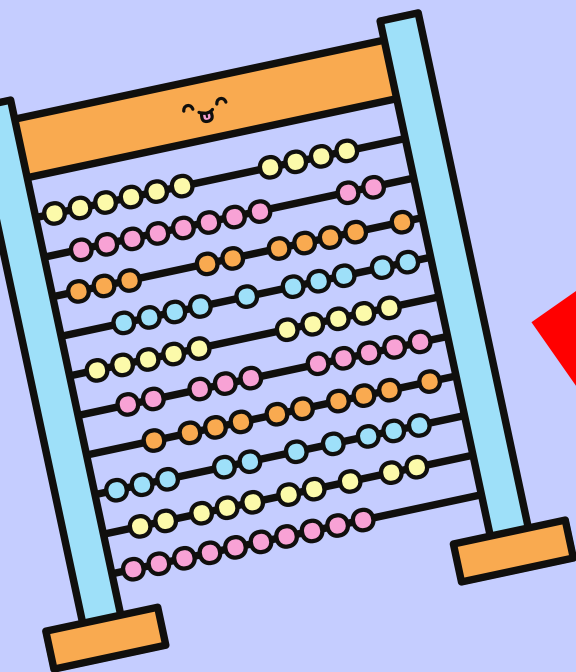
$$15 - 6 = 9$$

9 birds remained

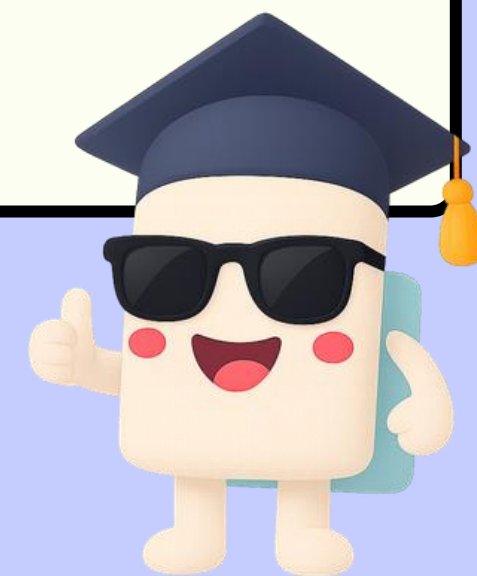
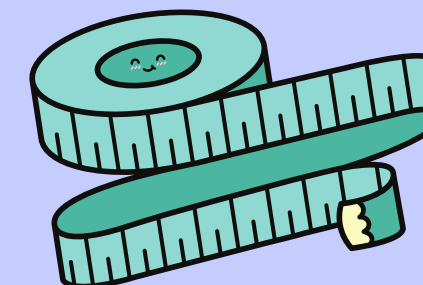
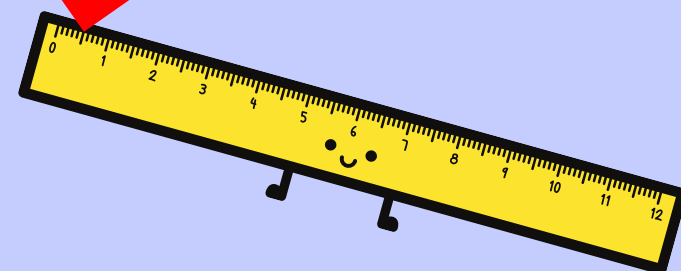




Well Done!
Keep choosing a
strategy.



PREVIEW



Introduction to Subtraction Quiz



Question 1 · Multiple choice

What does subtraction mean?

- A. Put more together
- B. Take some away
- C. Make two equal groups
- D. Count even objects twice



Question 1 · Answer

B. Take some away

Subtraction starts with an amount, takes some away and finds how many remain.



Question 2 · True or false

$$8 - 3 = 5$$

True or false?

Be ready to explain how you know.



Question 2 · Answer

TRUE

$$8 - 3 = 5$$

Start with 8, take away 3, and 5 remain.



Question 3 · Short answer

Solve:

$$9 - 4 = \underline{\quad}$$

You may use objects, a drawing, count back or a number line.



Question 3 . Answer

$$9 - 4 = 5$$

Count back from 9: 8, 7, 6, 5.



Question 4 · Multiple choice

There are 7 objects. 2 are taken away.

Which sentence matches?

A. $7 + 2 = 9$

B. $7 - 2 = 5$

C. $7 - 5 = 3$

D. $7 + 5 =$



Question 4 · Answer

B. $7 - 2 = 5$

The starting amount is 7. 2 are taken away and 5 remain.



Question 5 · True or false

$$10 - 6 = 5$$

True or false?

Check the answer with a calculator



Question 5 · Answer

FALSE

$$10 - 6 = 4$$

Four remain not five



Question 6 · Count back

Solve by counting back:

$$12 - 5 = \underline{\hspace{2cm}}$$

Write the five numbers you count back.



Question 6 · Answer

$$12 - 5 = 7$$

Count back: 11, 10, 9, 8, 7



Question 7 · Multiple choice

Which addition fact helps solve $10 - 7$?

A. $7 + 3 = 10$

B. $7 + 7 = 14$

C. $10 + 7 = 17$

D. $3 + 3 = 6$



Question 7 · Answer

A. $7 + 3 = 10$

Because 7 and 3 make 10. $10 - 7 = 3$.



Question 8 · Number line

Start at 14 and jump left 6 spaces.

$$14 - 6 = \underline{\quad}$$

Where do you land?



Question 8 · Answer

$$14 - 6 = 8$$

Starting at 14, six leftward jumps land on



Question 9 . Story problem

Eleven birds sat on a fence. Four flew away.

Which equation solves the story?

A. $11 + 4 = 15$

B. $11 - 4 = 7$

C. $7 - 4 = 3$

D. $7 + 4 =$



Question 9 . Answer

B. $11 - 4 = 7$

The story starts with 11 birds and takes 4 away, so 7 birds remain.



Question 10 · Short-answer question

Fifteen balloons were ready for a party. Six people popped them.
How many balloons remained?

Write an equation and an answer sentence.



Question 10 · Answer

$$15 - 6 = 9$$

9 balloons remained.

A useful strategy is to count back six from 15.



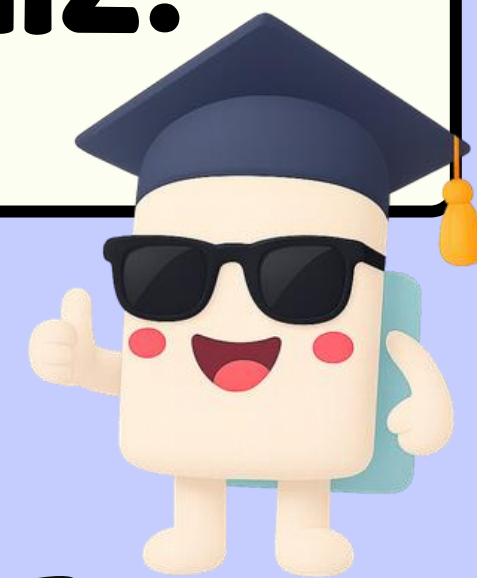
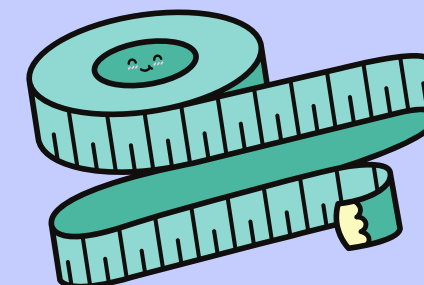
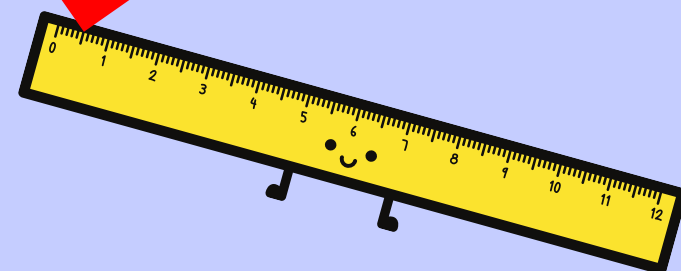
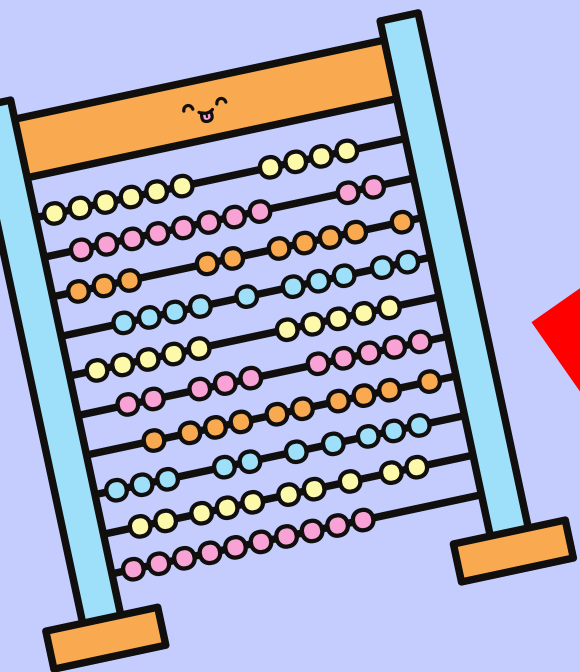
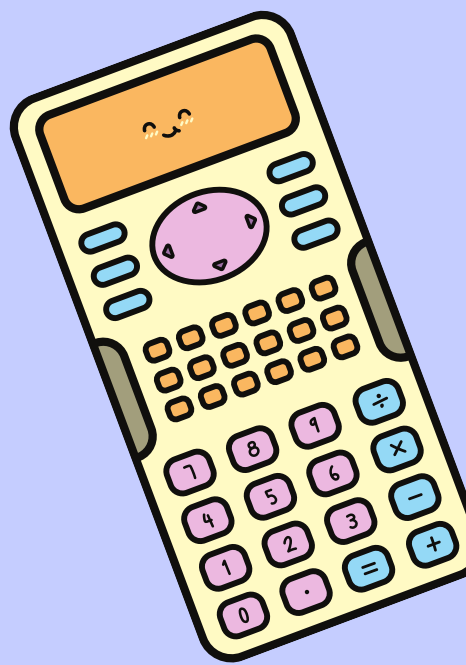
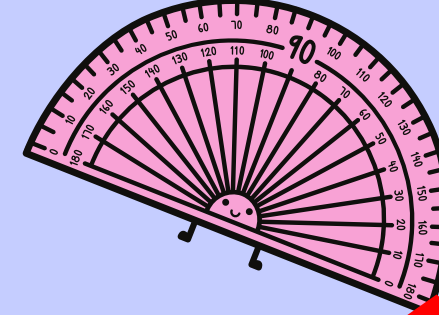
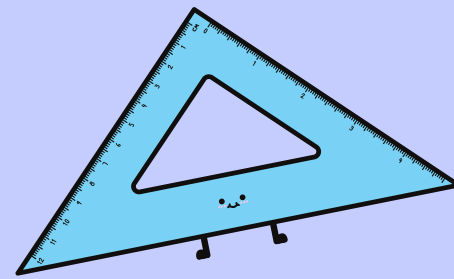
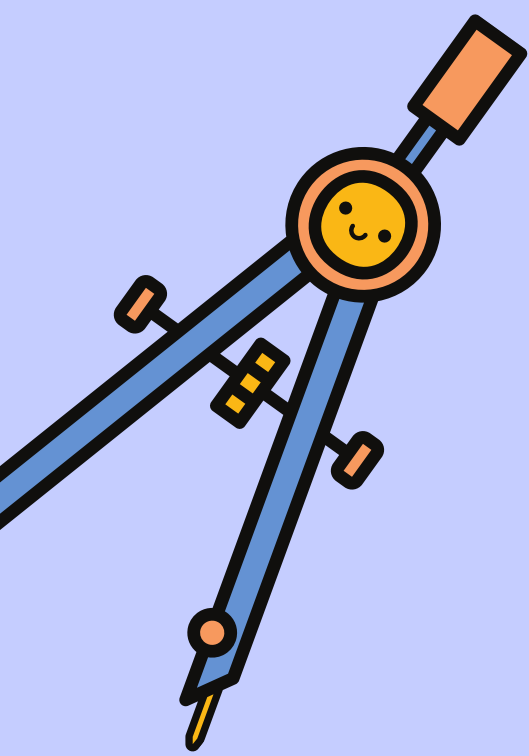
Quick self-check

Name one subtraction strategy.

Explain when it helps you.

I can use _____ when _____.





Well Done!
You completed the quiz.

PREVIEW