Addition and Subtraction Within 20

Count on, make a ten, doubles, and fact families for the facts students use every day

IN THIS PACKET YOU WILL LEARN TO

- ✓ Use count on, make a ten, and doubles to add within 20
- ✓ Think addition to subtract and write a fact family
- ✓ Find a missing number in an addition or subtraction fact
- ✓ Solve one-step and two-step word problems within 20

Name _____

Teacher _____

Class _____

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Name _____ Date _____

What Addition and Subtraction Mean

ANSWER KEY LEARN

Read this page with your teacher, and look at each picture before you read the steps next to it.

PUTTING GROUPS TOGETHER



There are 5 red apples and 3 green apples.

1. Start with the first group, which has 5 apples.
2. Join the second group, which has 3 apples.
3. You can count on from 5, or you can add 5 + 3.

5 + 3 = 8 apples

TAKING SOME AWAY

There are 9 muffins, and 4 muffins get eaten.

1. Start with 9 muffins on the plate.
2. Four of those muffins get eaten, so take 4 away.
3. You can count back from 9, or you can subtract 9 − 4.

9 − 4 = 5 muffins

WORDS TO KNOW

addend	A number you add. In 5 + 3 = 8, the addends are 5 and 3.
sum	The answer when you add. In 5 + 3 = 8, the sum is 8.
difference	The answer when you subtract. In 9 − 4 = 5, the difference is 5.
fact family	A set of related facts that use the same three numbers, such as 5 + 3 = 8 and 8 − 3 = 5.

Name _____ Date _____

Strategies You Can Use

ANSWER KEY LEARN

Each box shows a strategy you can use when a fact feels hard, so read the steps and try the strategy on the fact in the example.

COUNT ON

Find 8 + 3.

1. Start at the bigger number, which is 8.
2. Count on three more: 9, 10, 11.
3. You counted on 3, so 8 + 3 = 11.

8 + 3 = 11

MAKE A TEN

Find 9 + 5.

1. Take 1 from the 5 to make 9 into 10.
2. You have 4 left from the 5.
3. 10 + 4 = 14, so 9 + 5 = 14.

9 + 5 = 14

DOUBLES AND NEAR DOUBLES

Find 6 + 7.

1. You know the double 6 + 6 = 12.
2. Seven is one more than six, so add one more.
3. 12 + 1 = 13, so 6 + 7 = 13.

6 + 7 = 13

THINK ADDITION TO SUBTRACT

Find 14 – 6.

1. Ask yourself what plus 6 equals 14.
2. You know 8 + 6 = 14.
3. So 14 − 6 = 8.

14 − 6 = 8

Try it

1. Use make a ten to find 8 + 6.

SHOW YOUR WORK

8 + 2 = 10, and 10 + 4 = 14

Answer: 14

2. Think addition to find 15 − 7.

SHOW YOUR WORK

7 + 8 = 15, so 15 − 7 = 8

Answer: 8

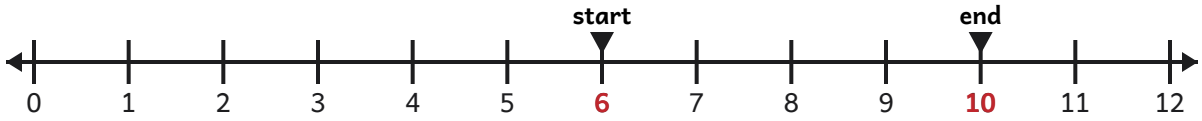
Name _____ Date _____

Number Lines and Ten Frames

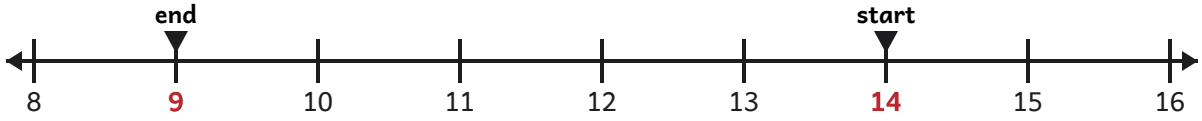
ANSWER KEY | GUIDED PRACTICE

Look at each number line and follow the hops. Write the addition or subtraction fact that the hops show.

1. Start at 6 and hop 4 more.



2. Start at 14 and hop back 5.



3. The first number line shows

6 + 4 = 10

4. The second number line shows

14 − 5 = 9

Draw your own hops

5. Draw hops on a number line to show 7 + 5, then write the fact.

SHOW YOUR WORK

Answer: 7 + 5 = 12

6. Draw hops on a number line to show 13 − 4, then write the fact.

SHOW YOUR WORK

Answer: 13 − 4 = 9

Name _____ Date _____

Facts Within 10

ANSWER KEY PRACTICE ★

Write each sum or difference on the line. In the last two rows, find the missing number that makes the fact true.

1. 4 + 3 = 7 **2.** 6 + 2 = 8 **3.** 5 + 5 = 10 **4.** 9 + 1 = 1

5. 8 − 3 = 5 **6.** 7 − 2 = 5 **7.** 10 − 4 = 6 **8.** 9 − 6 =

9. 3 + 5 = 8 **10.** 2 + 7 = 9 **11.** 4 + 4 = 8 **12.** 8 + 2 = 1

13. 10 − 7 = 3 **14.** 6 − 3 = 3 **15.** 8 − 5 = 3 **16.** 7 − 4 =

Find the missing number

17. 5 + 4 = 9 **18.** 3 + 5 = 8 **19.** 10 − 4 = 6

20. 7 − 2 = 5 **21.** 7 + 3 = 10 **22.** 4 + 5 = 9

Name _____ Date _____

Facts Within 20

ANSWER KEY | PRACTICE ★★

Write each sum or difference on the line. Then find each missing number, and write the symbol for greater than, less than, or equal to between each pair.

1. 8 + 7 = 15 **2.** 9 + 6 = 15 **3.** 13 − 5 = 8 **4.** 16 − 8 = ___

5. 7 + 9 = 16 **6.** 6 + 8 = 14 **7.** 15 − 7 = 8 **8.** 14 − 6 = ___

9. 9 + 8 = 17 **10.** 5 + 9 = 14 **11.** 17 − 9 = 8 **12.** 12 − 4 = ___

13. 8 + 6 = 14 **14.** 7 + 8 = 15 **15.** 18 − 9 = 9 **16.** 11 − 3 = ___

Find the missing number

17. 7 + 8 = 15 **18.** 9 + 8 = 17 **19.** 14 − 8 = 6

20. 15 − 7 = 8 **21.** 6 + 8 = 14 **22.** 7 + 9 = 16

Compare with <, >, or =

23. 8 + 6 = 9 + 5 **24.** 15 − 7 < 6 + 3

25. 9 + 8 > 20 − 4 **26.** 12 − 5 < 4 + 4

Name _____ Date _____

Sort the Facts

ANSWER KEY | CUT AND PASTE

Cut out the twelve fact cards at the bottom of the page and find each answer. Glue each card in the column where its answer belongs.

Answer less than 8	Answer from 8 to 12	Answer greater than 12
3 + 2	6 + 4	8 + 7
9 – 4	15 – 5	9 + 6
6 – 3	7 + 5	16 – 2
4 + 3	9 + 3	7 + 8

1. Look at the facts whose answers are greater than 12. What do you notice about those facts?

Those facts add two bigger numbers, or they start with a teen number and subtract a small number.

✂

3 + 2	6 + 4	9 + 6	16 – 2
8 + 7	4 + 3	15 – 5	9 + 3
7 + 5	6 – 3	9 – 4	7 + 8

Name _____ Date _____

Match the Story to the Fact

ANSWER KEY MATCH

Read each story on the left and find the fact on the right that tells about it. Write the letter of the fact on the line.

STORY		FACT
1. 6 birds sit on a wire, and 3 more birds land	C	**A** 8 + 7 = 15
2. 12 cookies are on a plate, and 5 cookies get eaten	B	**B** 12 − 5 = 7
3. 8 red crayons and 7 blue crayons sit in a box	A	**C** 6 + 3 = 9
4. 15 kids play soccer, and 6 kids go home	D	**D** 15 − 6 = 9
5. 9 frogs sit on a log, and 4 more frogs hop on	F	**E** 10 − 2 = 8
6. 10 balloons start the party, and 2 balloons pop	E	**F** 9 + 4 = 13

7. Write your own story for the fact 7 + 6 = 13.

Sample answer: There are 7 red cups and 6 blue cups on the table, so there are 13 cups in all.

Name _____ Date _____

Mystery Picture

ANSWER KEY | COLOR BY SUM

Find the answer in each square, then color the square with the color from the key that matches that answer. When you finish, a picture will appear.

- **Light blue**: The answer is 8 or 9.
- **Blue**: The answer is 12 or 13.
- **Cream**: The answer is 15 or 16.
- **Green**: The answer is 6 or 7.

5 + 3	6 + 3	4 + 4	10 − 1	7 + 2	6 + 6	7 + 6	12 − 4	3 + 5	11 − 2
5 + 3	6 + 3	4 + 4	10 − 1	8 + 4	9 + 4	15 − 3	7 + 2	12 − 4	3 + 5
11 − 2	5 + 3	6 + 3	16 − 3	5 + 7	10 + 3	6 + 6	7 + 6	4 + 4	10 − 1
7 + 2	12 − 4	8 + 4	9 + 4	15 − 3	16 − 3	5 + 7	10 + 3	6 + 6	3 + 5
8 + 7	9 + 7	9 + 6	8 + 8	20 − 5	18 − 2	7 + 8	10 + 6	8 + 7	9 + 7
11 − 2	9 + 6	8 + 8	20 − 5	18 − 2	7 + 8	10 + 6	8 + 7	9 + 7	5 + 3
6 + 3	4 + 4	9 + 6	8 + 8	20 − 5	18 − 2	7 + 8	10 + 6	10 − 1	7 + 2
12 − 4	3 + 5	11 − 2	8 + 7	9 + 7	9 + 6	8 + 8	5 + 3	6 + 3	4 + 4
3 + 3	4 + 3	10 − 4	9 − 2	2 + 4	11 − 4	5 + 2	8 − 1	3 + 3	4 + 3
10 − 4	9 − 2	2 + 4	11 − 4	5 + 2	8 − 1	3 + 3	4 + 3	10 − 4	9 − 2

Name _____ Date _____

Addition Riddle

ANSWER KEY RIDDLE

Solve each fact and find the answer in the code table. Write the letter for that answer on the line with the same number to answer the riddle.

Why was the math book sad?

I	T		H	A	D		T	O	O		M	A	N	Y
1	2		3	4	5		6	7	8		9	10	11	12

P	R	O	B	L	E	M	S
13	14	15	16	17	18	19	20

CODE TABLE

4	5	6	7	8	9	10	11	12
K	W	S	B	R	A	N	D	I

13	14	15	16	17	18	19	20	M
T	H	O	P	Y	L	E		

1. 6 + 6 = 12 **2.** 8 + 6 = 14 **3.** 7 + 8 = 15 **4.** 4 + 5 = _

5. 5 + 6 = 11 **6.** 9 + 5 = 14 **7.** 8 + 8 = 16 **8.** 9 + 7 = 1

9. 6 + 7 = 13 **10.** 3 + 6 = 9 **11.** 4 + 6 = 10 **12.** 9 + 9 = 1

13. 8 + 9 = 17 **14.** 3 + 5 = 8 **15.** 7 + 9 = 16 **16.** 4 + 3 = _

17. 10 + 9 = 19 **18.** 12 + 8 = 20 **19.** 8 + 5 = 13 **20.** 2 + 4 = _

Name _____ Date _____

Word Problems Within 20

ANSWER KEY APPLY

Read each problem twice and draw a picture or write a number sentence in the work box. Write your answer with the label on the line.

1. Sam has 9 stickers, and his friend gives him 6 more. How many stickers does Sam have now?

SHOW YOUR WORK

9 + 6 = 15

Answer: 15 stickers

2. There are 16 pencils in a cup, and 7 pencils get used. How many pencils are left in the cup?

SHOW YOUR WORK

16 − 7 = 9

Answer: 9 pencils

3. Lia has 8 red beads and 5 blue beads. She uses 4 beads for a bracelet. How many beads does she have left?

SHOW YOUR WORK

8 + 5 = 13, and 13 − 4 = 9

Answer: 9 beads

4. A class has 18 chairs. 11 students sit down, and then 3 more students come in. How many empty chairs are left?

SHOW YOUR WORK

18 − 11 = 7, and 7 − 3 = 4

Answer: 4 chairs

Name _____ Date _____

Find the Mistake

ANSWER KEY | ERROR ANALYSIS ★★

Each box shows work from a student who made a mistake. Read the work carefully, explain what went wrong, and then answer the question below it.

Omar's work

I counted on from 9 to find 9 + 6.
I said 9, 10, 11, 12, 13, 14.
So I think 9 + 6 = 14.

1. What mistake did Omar make? Explain it in a complete sentence.

Omar started counting at 9, so he only counted on 5 times. He needed to start after 9 and count six numbers: 10, 11, 12, 13, 14, 15.

2. Count on the right way to find 8 + 5. Write the numbers you say.

YOUR WORK

9, 10, 11, 12, 13 so 8 + 5 = 13

Priya's work

Here is my fact family for 6, 9, and 15.
6 + 9 = 15 and 9 + 6 = 15
15 – 6 = 9 and 15 – 9 = 7

3. Which fact in Priya's family is wrong, and how do you know?

The fact 15 – 9 = 7 is wrong, because 9 + 6 = 15. The correct fact is 15 – 9 = 6.

4. Write the fact family for 7, 8, and 15.

YOUR WORK

7 + 8 = 15, 8 + 7 = 15, 15 – 7 = 8, 15 – 8 = 7

Name _____ Date _____

Explain Your Strategy

ANSWER KEY

WRITE ABOUT MATH

Answer each question in complete sentences. Use the sentence starters if they help, and use the words addend, sum, or difference in your writing.

1. Choose a fact that feels hard to you, such as 9 + 7 or 15 − 8. Which strategy helps you find the answer, and how does it work?

   The fact I chose is _____. A strategy that helps me is _____, because _____.

Sample answer: The fact I chose is 9 + 7. I make a ten by taking 1 from the 7, so 9 + 1 = 10 and 10 + 6 = 16.

DRAW A NUMBER LINE, TEN FRAME, OR EQUAL GROUPS THAT SHOWS YOUR STRATEGY

2. How are 8 + 6 and 14 − 6 alike, and how are they different?

Sample answer: Both facts use the numbers 8, 6, and 14. They are different because one adds to find a sum and the other subtracts to find a difference.

Name _____ Date _____

Mixed Review

ANSWER KEY REVIEW

Solve each problem and check your work when you finish. Use any strategy from this packet that helps you.

1. 9 + 5 = 14 **2.** 7 + 8 = 15 **3.** 16 − 9 = 7 **4.** 13 − 6 = ___

5. 8 + 8 = 16 **6.** 6 + 9 = 15 **7.** 17 − 8 = 9 **8.** 14 − 5 = ___

Find the missing number

9. 9 + 7 = 16 **10.** 9 + 6 = 15 **11.** 18 − 9 = 9

Compare with <, >, or =

12. 8 + 7 = 9 + 6 **13.** 15 − 8 < 4 + 4

14. A bus holds 12 riders. 5 more riders get on. How many riders are on the bus now?

SHOW YOUR WORK

12 + 5 = 17

Answer: 17 riders

15. Maya starts with 19 crayons, gives 6 crayons to a friend, and then finds 2 more. How many crayons does Maya have now?

SHOW YOUR WORK

19 − 6 = 13, and 13 + 2 = 15

Answer: 15 crayons

Name _____ Date _____

Exit Tickets

ANSWER KEY CHECK

Your teacher will cut this page on the dotted line so each student gets one ticket. Solve all four problems on your own and show your work.

Addition and Subtraction Exit Ticket

Name _____

1. 8 + 7 = 15

2. 8 + 6 = 14

3. 15 − 9 = 6

4. Ken has 9 books, and he gets 5 more books. How many books does Ken have now?

SHOW YOUR WORK

9 + 5 = 14

Answer: 14 books

Addition and Subtraction Exit Ticket

Name _____

1. 8 + 7 = 15

2. 8 + 6 = 14

3. 15 − 9 = 6

4. Ken has 9 books, and he gets 5 more books. How many books does Ken have now?

SHOW YOUR WORK

9 + 5 = 14

Answer: 14 books

Name _____ Date _____

How Did I Do?

ANSWER KEY SELF-CHECK

Read each skill and put a check in the box that fits you best. Then answer the two questions at the bottom of the page.

Skill	I can do this on my own.	I can do this with a little help.	I am still learning this.
I can add two numbers within 20.	☐	☐	☐
I can subtract two numbers within 20.	☐	☐	☐
I can find a missing number in a fact.	☐	☐	☐
I can use a strategy such as make a ten or think addition.	☐	☐	☐
I can solve word problems that use addition or subtraction.	☐	☐	☐

1. Which fact or skill do you want to practice more, and why?

Answers will vary. Look for a specific fact or skill and a reason.

2. Which strategy from this packet helps you the most? Show how it works with one fact.

Answers will vary. Look for a named strategy such as count on, make a ten, doubles, or think addition.