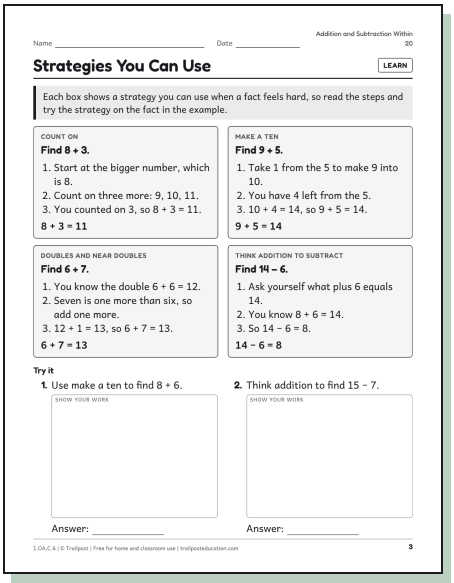
FREE TEACHER GUIDE AND INSTALL GUIDE

Addition and Subtraction Within 20

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

Grades 1 to 2 | **Math** | **16 student pages** | **Full answer key**



Name _____ Date _____ Addition and Subtraction Within 20

Strategies You Can Use 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

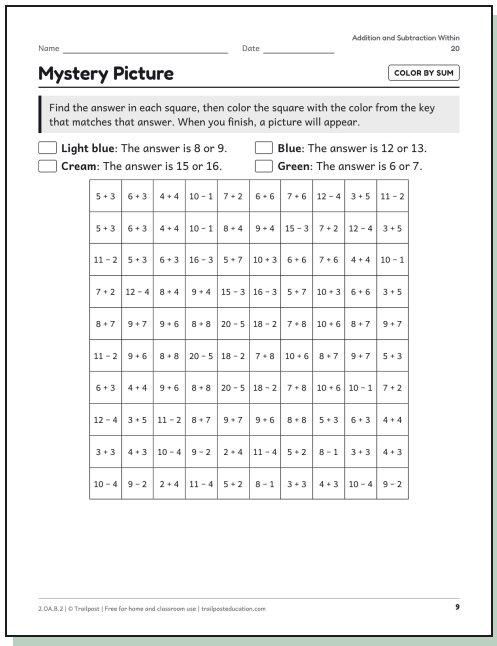
Answer: _____

2. Think addition to find 15 − 7.

SHOW YOUR WORK

Answer: _____

1.OA.C.6 | © Trailpost | Free for home and classroom use | trailposteducation.com 3



Name _____ Date _____ Addition and Subtraction Within 20

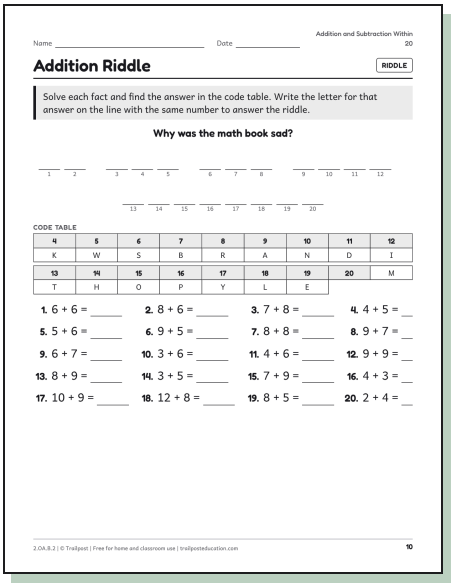
Mystery Picture COLOR BY SUM

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

2.OA.B.2 | © Trailpost | Free for home and classroom use | trailposteducation.com 9



Name _____ Date _____ Addition and Subtraction Within 20

Addition Riddle 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?

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

_____ _____ _____ _____ _____ _____ _____ _____
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 = _____ 2. 8 + 6 = _____ 3. 7 + 8 = _____ 4. 4 + 5 = __
5. 5 + 6 = _____ 6. 9 + 5 = _____ 7. 8 + 8 = _____ 8. 9 + 7 = __
9. 6 + 7 = _____ 10. 3 + 6 = _____ 11. 4 + 6 = _____ 12. 9 + 9 = __
13. 8 + 9 = _____ 14. 3 + 5 = _____ 15. 7 + 9 = _____ 16. 4 + 3 = __
17. 10 + 9 = _____ 18. 12 + 8 = _____ 19. 8 + 5 = _____ 20. 2 + 4 = __

2.OA.B.2 | © Trailpost | Free for home and classroom use | trailposteducation.com 10

STUDENTS 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

A free resource from Trailpost

trailposteducation.com/free

Getting started

What is in your download

File	What it is
Student-Pages.pdf	The 16-page student packet, starting with a cover page that has a name line and a table of contents.
Answer-Key.pdf	The same pages with every answer filled in, so you can check work quickly or project a page to go over it together.
Teacher-Guide.pdf	This guide, which explains how to print the packet, how to pace it, and which standards it covers.

How to open the files

1. On a Chromebook, open the Files app, double-click the zip folder, and drag the three PDFs into Google Drive or onto the desktop.
2. On a Windows computer, right-click the zip folder and choose Extract All, then open the new folder that appears.
3. On a Mac, double-click the zip folder and a regular folder with the three PDFs will open next to it.
4. Open each PDF in your browser or in any PDF reader, and you are ready to print.

How to print

- Set the print scale to Actual Size or 100 percent so the boxes and lines stay the right size for student handwriting.
- Black and white printing works well, because every page uses black lines and light gray shading.
- Print pages 7 and 15 on one side only, because students cut those pages apart.
- The exit ticket page holds two copies of the same ticket, so one printed page covers two students.

One star and two stars

Pages marked with one star (5) give steady practice with friendly numbers and extra support. Pages marked with two stars (6, 12) ask for more steps and more explaining. Students who finish the one-star page with few mistakes can move straight to the two-star page, and students who need more time can do the one-star page twice with a partner.

Using the answer key

The answer key matches the student packet page for page, so page 6 of the key answers page 6 of the student packet. Written answers in the key are sample answers, and any answer that gives the same idea with good reasoning should earn credit.

© Trailpost | trailposteducation.com

What is inside

Students learn four strategies for addition and subtraction within 20, then practice missing addends, fact families, and word problems. The packet moves from guided pages to two levels of practice, puzzles, error analysis, a writing page, a review, exit tickets, and a self-check.

Page	Title	What students do
1	**Cover**	Students write their name and see a list of every page in the packet.
2	**What Addition and Subtraction Mean** Learn | 1.OA.A.1	Students see addition as putting groups together and subtraction as taking some away, and they learn the words addend, sum, and difference.
3	**Strategies You Can Use** Learn | 1.OA.C.6	Students learn four strategies: count on, make a ten, doubles and near doubles, and think addition to subtract.
4	**Number Lines and Ten Frames** Guided Practice | 1.OA.C.6	Students use number lines to count on and count back, then write the matching fact.
5	**Facts Within 10** Practice ★ | 1.OA.C.6	Students practice addition and subtraction facts within 10, including missing addends.
6	**Facts Within 20** Practice ★★ | 2.OA.B.2	Students practice harder facts within 20, find missing numbers, and compare sums and differences.
7	**Sort the Facts** Cut and Paste | 1.OA.C.6	Students find twelve sums or differences and glue each fact under the right range.
8	**Match the Story to the Fact** Match | 1.OA.A.1	Students match eight short stories to the addition or subtraction facts they describe, then write their own story.
9	**Mystery Picture** Color by Sum | 2.OA.B.2	Students find the sum or difference in each square and color it to reveal a hidden sailboat.
10	**Addition Riddle** Riddle | 2.OA.B.2	Students solve twenty facts and use a code table to turn each answer into a letter that answers a riddle.
11	**Word Problems Within 20** Apply | 1.OA.A.1	Students solve four word problems, and the last two take two steps.
12	**Find the Mistake** Error Analysis ★★ | 1.OA.C.6	Students study two pieces of student work, explain each mistake, and solve a new fact with a strategy.
13	**Explain Your Strategy** Write About Math | 1.OA.C.6	Students pick a hard fact, explain a strategy for it in writing, draw a model, and compare two related facts.
14	**Mixed Review** Review | 1.OA.A.1, 1.OA.D.8, 2.OA.B.2	Students review every skill in the packet: facts, missing numbers, comparing answers, and two word problems.
15	**Exit Tickets** Check | 1.OA.A.1, 2.OA.B.2	Two copies of a short exit ticket on each page so you can check understanding in about five minutes.
16	**How Did I Do?** Self-Check | 1.OA	Students rate their own progress on each skill and set one goal for practice.

© Trailpost | trailposteducation.com

Pacing and standards

A suggested plan

Day	Pages	What to do
Day 1	2 to 4	Read the two Learn pages together and talk through each strategy, then have partners finish the guided page while you check in.
Day 2	5 to 6	Students start with the one-star page and move to the two-star page when they finish with few mistakes.
Day 3	7 to 10	Use the sort, the match, the mystery picture, and the riddle as centers or as a fun Friday set.
Day 4	11 to 13	Students solve the word problems, find the mistakes on the error page, and explain a strategy in writing.
Day 5	14 to 16	Give the review page as a quiz, use the exit ticket the next morning, and finish with the self-check.

Standards

Code	Standard
1.OA.A.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.
1.OA.B.3	Apply properties of operations as strategies to add and subtract.
1.OA.C.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on, making ten, and decomposing a number leading to a ten.
1.OA.D.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.
2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By the end of Grade 2, know from memory all sums of two one-digit numbers.

Teaching tips

- Keep a ten-frame or a number line at every table during the first two days, so students can see the make-a-ten strategy while they write.
- The mystery picture and the riddle check themselves, because a wrong sum or difference gives a color or a letter that looks wrong.
- Ask students to say the related addition fact out loud before they subtract, because thinking addition first makes subtraction much easier.

© Trailpost | trailposteducation.com

Thank you for downloading this packet

I made this packet for families and teachers who need solid practice pages that are ready to print tonight, and I hope it saves you some planning time this week.

Hear about the next free packet

I give away free resources from time to time, and people on the Trailpost email list hear about each one first.

To join the list, open trailposteducation.com/free and enter your email address at the bottom of the page.

Something look wrong?

If you find a mistake on a page or in the answer key, please email support@trailposteducation.com. I read every message, and I will fix the file and post the new version for everyone.

Terms of use

You may print and copy these pages for your own students at home or in class, and you may post the PDFs inside a password-protected class page such as Google Classroom. Please send friends and colleagues to trailposteducation.com/free so they can download their own free copy, and keep the files off public websites.

More free Trailpost packets

These packets are also free on the Trailpost website, and each one comes with an answer key and a teacher guide like this one.

- **Claim, Evidence, Reasoning with Data** | Science, grades 6 to 9
- **CVC Words and Short Vowels** | ELA, grades K to 1
- **Ecosystems and Food Webs** | Science, grades 4 to 6
- **One-Step and Two-Step Equations** | Math, grades 6 to 8
- **Figurative Language** | ELA, grades 4 to 6
- **Equivalent Fractions and Number Lines** | Math, grades 3 to 5
- **Main Idea and Key Details** | ELA, grades 3 to 5
- **Map Skills** | Social Studies, grades 3 to 5
- **Multiplication Fact Strategies** | Math, grades 3 to 4
- **Citing Text Evidence** | ELA, grades 5 to 8
- **Telling Time and Counting Money** | Math, grades 2 to 3

More from Trailpost

If your students liked this packet, these Trailpost resources practice related skills. Click any card to open its page in the Trailpost shop.



MATHteroids

GRADES 2 TO 5 | DIGITAL GAME

Students fly a ship and blast only the asteroids that match the math rule.

See it in the shop



Math Maker

GRADES 2 TO 6 | CLASSROOM TOOL

Teachers print as many math practice pages as they need, and each page comes with its own answer key.

See it in the shop



EQUATRO

GRADES 4 TO 9 | DIGITAL GAME

Students combine number cards with operations until they hit the target number.

See it in the shop



REWIND

GRADES 2 TO 5 | DIGITAL GAME

Students solve detective cases in the city of Tickwell by reading analog and digital clocks.

See it in the shop



Dogger

GRADES 3 TO 6 | DIGITAL GAME

Students hop a dog across the road by landing on the right multiples and factors.

See it in the shop



Classroom Party Mega Pack

GRADES 1 TO 8 | DIGITAL GAME

Seventeen team games run on one screen for class parties and community days.

See it in the shop

See everything at shop.trailposteducation.com