

Facts with 5 on a Ten-Frame

FOCUS

Mathematics Objective Use a ten-frame to solve addition facts with 5 and 10.

Language Objective Draw and recognize pictures, orally and in writing, and complete equations to show addition facts with 5 and 10.

Essential Understanding Facts with sums 6 through 10 can be broken into 5 plus some more.

COHERENCE

Look Back Previously in this topic, students used counting strategies involving related facts to learn addition facts.

This Lesson Students use a ten-frame to learn addition facts by relating them to benchmark numbers 5 and 10.

Look Ahead Later, students will extend their work with ten-frames when they use this structure to solve basic facts through 20.

Additional Connection Making ten using a ten-frame connects to finding a number to make ten.

RIGOR

Conceptual Understanding This lesson places an emphasis on the important benchmark number of 5 when learning addition facts to 10.

Procedural Skill Students develop procedural skills as they use facts with 5 to create a fact with a sum of 10.

Vocabulary

Revisit previously taught vocabulary.

Materials

- Two-color counters (or Teaching Tool 77)

Student Resources

 Family Engagement

Intervention System (IS)

B22 Facts with 5 on a Ten-Frame

Teacher Resources

Available at
Savvas Realize®.

 Editable Lesson Plan

 Lesson Presentation Slides

 enVision on the Go: Planning Support



Notes

Language Support

Explanatory Talk Use this activity with Practice and Problem Solving Items 3–8 to make connections to the mathematical meaning of ten-frame. Show students a ten-frame (Teaching Tool 40) or draw one on the board.

Ask questions such as the following.

Why do you think this is called a ten-frame? [Sample answer: because it has a frame around 10 boxes]

A ten-frame can be used to solve math problems with numbers up to 10. Have students work independently to practice using a ten-frame to solve addition facts.

An additional activity is available online.

- Use the activity about Thinking Aloud with the Guided Practice.

Math Talk

What's the Pattern?

Describe the pattern.
What are the next two equations?



$$\begin{aligned} 1 + 1 &= 2 \\ 2 + 2 &= 4 \\ 3 + 3 &= 6 \\ 4 + 4 &= 8 \\ 5 + 5 &= 10 \end{aligned}$$

Sample answer:
The first addend is 1 more each time.
The second addend is 1 more each time.
The sum is 2 more each time.
The next two equations are $6 + 6 = 12$ and $7 + 7 = 14$.

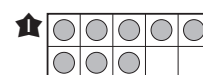
Number Sense Give students the first five equations of the sequence, and then ask them to identify, describe, and extend the pattern. Ask: *What are the addends in each equation?* Have students write their answers or talk in pairs.

Exit Ticket

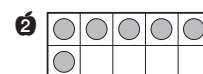
Formative Assessment

Lesson 2-4
Exit Ticket

Name _____



- Ⓐ $5 + 3 = 8$
Ⓑ $3 + 2 = 5$
Ⓒ $2 + 8 = 10$



- Ⓐ $5 + 1 = 6$
Ⓑ $6 + 4 = 10$
Ⓒ $10 + 0 = 10$

Math Goal			
	☐ I Can	☐ With Help	☐ Not Yet

Directions: Read each item to students. Have them mark the best answer. Say: ★ Look at the ten-frame. Find the addition fact with 5. ● Look at the ten-frame. Find the addition fact for 10. ● I can use a ten-frame to help solve addition facts with 5 and 10.

Teacher Answer Key

Assessment 1 of 1

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Auto scored version online.

Use the Exit Ticket results to support students as needed by reminding them that a ten-frame can be used to solve addition facts with numbers up to 10.

English Language Development

ELL English Language Learners (Visual Learning)

ELL English Language Learners (Practice and Problem Solving)

MLR7 Compare and Connect (Visual Learning)

Language Support (Practice and Problem Solving)

Step 1 Explore and Share

10-15 min

Explore and Share Scout Observational Assessment

ETP Explore and Share

Formative Assessment

Purpose Investigate ways to use a ten-frame to write and solve addition facts with 5 and 10.

Materials Two-color counters (or Teaching Tool 77)

Introduce WHOLE CLASS

Ask: Have you ever flipped/tossed a coin? Is the same thing on each side? What's on each side of the coin?

Monitor, Select, and Sequence SMALL GROUP

Observe students at work.

- **How do students place the counters on the ten-frame and match them to their addition equation?** They might group red and yellow counters or put them in random order.

Look for solutions that use facts with 5 as an addend. If students cannot explain how a ten-frame helps them add, ask: *How can you write an addend for each color counter? How many counters fill 1 row? The whole ten-frame? How close is your sum to 5 or 10?*

Select solutions for students to present. To relate to 5 and 10, show solutions that show how the ten-frame helped them add (Becky) before showing solutions that did not use counters to match addition equations (Dan).

Early Finishers

Have students use the counters to show whether changing how they placed red and yellow counters affects the sum.

Connect WHOLE CLASS

Connect Solution Strategies Discuss students' work. Both Becky and Dan used the ten-frame correctly to represent the number of counters. Becky used 5 as an addend to correctly complete the addition equation.

Connect to the Visual Learning During the Visual Learning, connect to student work in Explore and Share. Be sure students understand that facts with sums 6 through 10 can be broken into 5 plus some more using a ten-frame.

Name _____

Facts with 5 on a Ten-Frame

Let's Build

Lesson 2-4

I can ... use a ten-frame to help solve addition facts with 5 and 10.

Explore and Share

Use the ten-frame. Tell how it helps you add.



See margin for sample student work.

_____ + _____ = _____

Directions Read the problem to students. **Say:** Take a small handful of red and yellow counters. Toss them onto the page. Place them on the ten-frame. Write an addition equation to match the counters.

Sample Student Work

R	R	R	R	R
Y	Y	Y		

5 + 3 = 8

Becky's Work

Becky understood that once the first row of the ten-frame is filled, she can add 3 from 5 to get 8.

R	R	R	R	R
Y	Y			

5 + 2 = 8

Dan's Work

Dan filled the first row to 5 and wrote the addends correctly; however, his sum is incorrect.

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Visual Learning Animation

Visual Learning

A You can use a ten-frame to show an addition fact with 5.

Start with 5. Then add 3 more.

$5 + 3 = ?$

B 5 and 3 more is 8.

There are 8 counters in the ten-frame.

$5 + 3 = 8$

C The ten-frame shows another addition fact. You have 8. **Make 10.**

2 boxes are empty. Add 2.

D 8 plus 2 more is 10.

$8 + 2 = 10$

Talk About Math Ideas

Directions Read and review the Visual Learning with students. Then have them talk about math ideas.
Say: How can you use a ten-frame to help you add 5 + 4?

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ELL English Language Learners Reading

Students may be able to clarify the content they are learning about by speaking about it and asking questions. Have students use the ten-frames to ask questions about what they know and do not know about an addition fact.

Emerging Point to the ten-frame in the first box. Ask: *How many counters are here?* [5] *What do you want to know next? How many more counters do you need?* Encourage students to ask and speak about how the ten-frames show addition facts. Use sentence frames such as: "Five plus three _____ eight." and "You can add 2 more to 8 to make _____."

Expanding Have students work in small groups to talk about the ten-frame, and then answer the question: *How does the ten-frame help you see an addition fact?* Have them complete this sentence stem when answering: "The ten-frame helps me see an addition fact by _____."

Bridging Ask students to ask each other questions and explain how to use a ten-frame to find an addition fact.

ETP Visual Learning

Essential Question How can you use a ten-frame to show an addition fact with 5 and some more?

Classroom Conversation

A Model with Math How can you show 5 in the ten-frame? [Put 5 counters in the top row.]

B How many counters are in the top row? [5] In the bottom row? [3] How does the ten-frame help you see the addition fact $5 + 3 = 8$? [It breaks the sum up to show 5 and 3 more.]

C Use Structure How does the ten-frame help you see the 10 fact? [It breaks the number up to show how many more make 10.]

D Construct Arguments How does the ten-frame show $8 + 2 = 10$? [There are 8 red counters and 2 yellow counters, which is 10 in all.]

Prevent Misconceptions Watch for students who have empty frames in two rows. It is easier to see how many more are needed to make 10 by making a 5 in the ten-frame first.

MLR7 Compare and Connect

Ask: I want to use a ten-frame to solve $5 + 1 = ?$ How can I use my two-color counters to add $5 + 1$? [Have students flip over 5 counters of one color and 1 counter of another color, then add them to fill in the sum.]

ETP Talk About Math Ideas

Have students engage in a think-pair-share to show how filling in a ten-frame with a number 6 through 10 can be used to write an addition fact with 5 that adds the number in the bottom row of the ten-frame. Listen for conversations about how they use the rows of the ten-frame to add 5 and 4.

ETP Revisit the Essential Question

Students should see how the structure of a ten-frame, with each row being 5, can help them make a fact with 5 and some more.

Step 3 Practice and Problem Solving

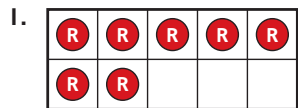


15-20 min

Interactive Practice

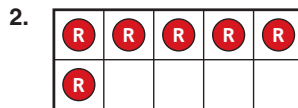
Name _____

Guided Practice



$$5 + \underline{2} = 7$$

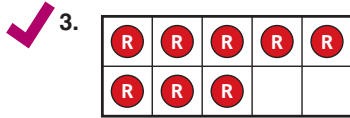
$$7 + \underline{3} = 10$$



$$5 + \underline{1} = \underline{6}$$

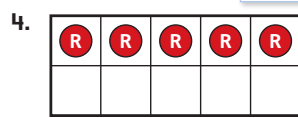
$$\underline{6} + \underline{4} = 10$$

Practice and Problem Solving



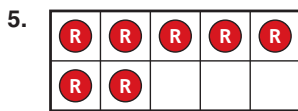
$$5 + \underline{3} = \underline{8}$$

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

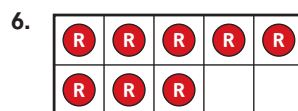


$$5 + \underline{0} = \underline{5}$$

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



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



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

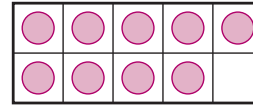
Directions For 1–4, **Say:** Look at the ten-frame. Write an addition fact with 5. Then write an addition fact for 10. For 5 and 6, have students look at the ten-frame and complete the addition fact for 10.

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You may opt to have students complete automatically scored practice items online.

7. Model

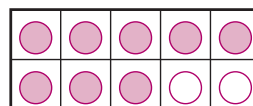


9 books

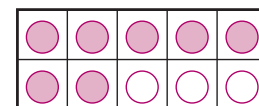
Check students' drawings.

8. Higher Order Thinking

Which number will make 10?



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



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



Assessment Practice

9. Choose the two sums that equal 10.

☒ $5 + 5 = \underline{\quad}$

☒ $7 + 3 = \underline{\quad}$

☐ $6 + 3 = \underline{\quad}$

☐ $4 + 7 = \underline{\quad}$

Directions Read each problem to students. 7. **Say:** Kami reads 5 books. Sue reads 4 books. How many books do they read in all? You can use the ten-frame to help. 8. **Say:** Choose 2 colors to draw counters in the ten-frames. Match the addition equations. Then write the missing numbers. 9. **Say:** Which sums equal 10?

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Guided Practice



Error Intervention Item 2

If students have trouble finding the fact that adds to 10, **then** have them fill the empty spaces with a different color counter.

Practice and Problem Solving

Item 7 Model with Math Students draw counters in the ten-frame to represent adding $5 + 4$ and find how many books in all.

ELL English Language Learners

Item 8 Connecting Representations. As students work on Item 8, point out to students that there are different ways to show the same information. Explain to students that the ten-frame matches the equations that they will fill in the missing number for.

ETP Quick Check



✓ Check marks indicate items for prescribing differentiation. Items 3 and 7: 2 points each. Item 9: 1 point. The online Quick Check is auto scored and auto prescribes differentiation.

Step 4 Assess and Differentiate



15-30 min

Differentiation Library **DL**

- Additional Differentiation Library resources are described at the start of this topic.
- Differentiation resources that support diverse learning styles are online and in the Differentiation Library Teacher's Guide.

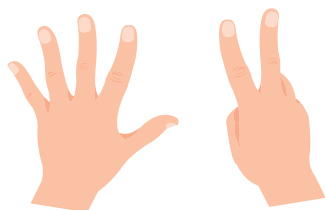
0-3 points: Intervention Activity or Reteach to Build Understanding Activity

4-5 points: Enrichment Activity

In addition, **English language learners** may benefit from the Build Mathematical Literacy Activity.

Intervention Activity

Materials Two-color counters, 10 for each student



- Have students work in pairs. Distribute 10 two-color counters to each student.
- Have students put five red counters in the first row of the ten-frame and one yellow counter in the second row.
- What is 5 plus 1? [6] How many counters would you need to fill the ten-frame? [4] So, 6 plus what number equals 10? [4] Have students write 4.

Video Tutorial

Available at Savvas Realize®

Students can access this video anytime to reinforce lesson content.

Another Look Video

Additional Practice

Printable or autoscored on Savvas Realize®

Name _____

Facts with 5 on a Ten-Frame

HOME ACTIVITY Play a game using ten-frames drawn on a sheet of paper. Draw some circles on each ten-frame. Then ask your child to write an accompanying equation using 5 or 10 below each ten-frame.

Another Look!

You can write an addition fact with 5 using a ten-frame. You can also write an addition fact for 10 using a ten-frame.

$5 + 1 = 6$

$6 + 4 = 10$

1.

2.

3.

$5 + 2 = 7$ $5 + 4 = 9$ $5 + 0 = 5$
 $7 + 3 = 10$ $9 + 1 = 10$ $5 + 5 = 10$

Directions Read and review the Another Look! examples with students. Have them trace over the number. For 1-3, **Say:** Look at the ten-frames. Write an addition fact with 5. Then write an addition fact for 10.

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4. $5 + 1 = 6$

5. $5 + 4 = 9$

6. $5 + 3 = 8$

$6 + 4 = 10$ $9 + 1 = 10$ $8 + 2 = 10$

7. Use Structure

Rich needs 10 helmets. He puts 4 in the van.

How many more does Rich need?

 $4 + 6 = 10$
 6 more helmets

8. Higher Order Thinking

7 fruits in all. 5 are peaches. The rest are oranges.

How many oranges?

 $7 = 5 + 2$
 2 oranges

9. Assessment Practice

Which sums equal 10? Choose three.

☐ $6 + 3 =$ _____

☒ $6 + 4 =$ _____

☒ $2 + 8 =$ _____

☒ $4 + 6 =$ _____

Directions For 4-6, **Say:** Write an addition fact with 5. Then write an addition fact for 10. **7. Say:** Rich needs 10 helmets. He puts 4 helmets in the van. How many more helmets does Rich need? Draw counters and write an equation to solve. **8. Say:** A box has 7 fruits. 5 are peaches. The rest are oranges. How many fruits are oranges? Draw counters and write an equation to solve. **9. Say:** Which sums equal 10? Choose three that apply.

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