Check Point: Write and Solve Your Own Problem

1 Write a problem that could be solved using the equation shown below.

$$214 - \square = 187$$

2 Show how to solve the problem that you wrote.

Stations for Pre-assessment in Preparation for 2(4)(C)

Materials:

- **Stations 1-3**
- **10-Frame Cards** – Copied on cardstock and laminated. One set for Station 2.

Students will rotate through the stations to complete the three problems using the provided representation.

After all the stations have been completed, sort the student work to look for the following:

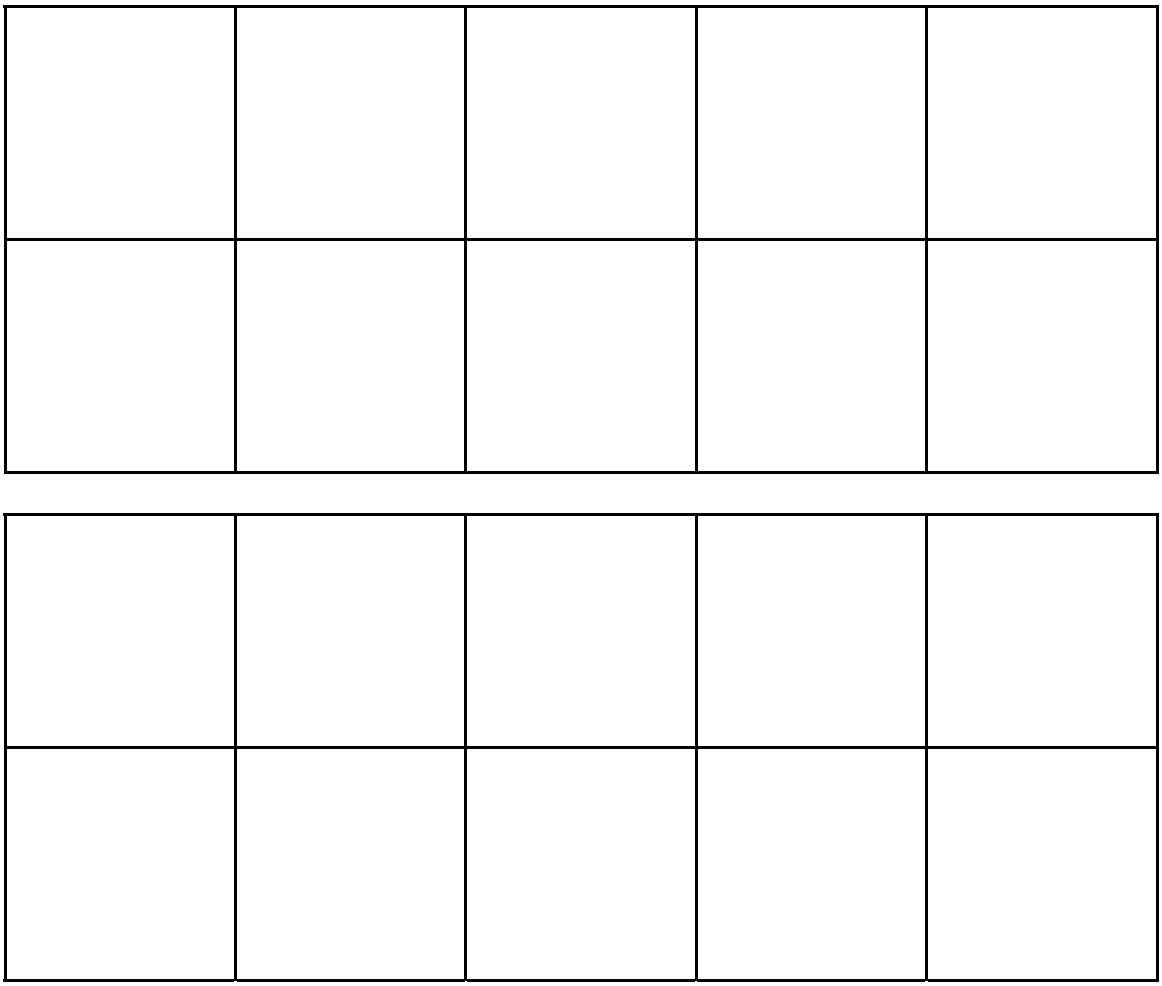
- Which models do we see students using the most often?
- With which models are students most successful?
- Which models are we NOT seeing students use?
- With which models are students least successful?
- Which processes or procedures are students using the most often?
- With which processes or procedures are students most successful?
- Which misconceptions are present in the work?
- Which steps are students taking the most often?

Based on the sorting, what are next steps?

- Which models or processes do we build from in our instructional activities?
- Which models or processes do we need to develop in our instructional activities?
- Which misconceptions or gaps do we need to address for the whole group?
- Which misconceptions or gaps do we need to address for a small group?

Station 1

- Use counters and a double-10 frame to solve the facts.
- Record a solution for each fact.



1 8 + 4 = _____

2 6 + 7 = _____

3 12 – 2 = _____

4 9 + 5 = _____

5 18 – 9 = _____

6 3 + 8 = _____

Station 2

- Use the 10-Frame Cards to solve each fact.
- Record a solution for each fact.

1 8 + 5 = _____

2 13 – 9 = _____

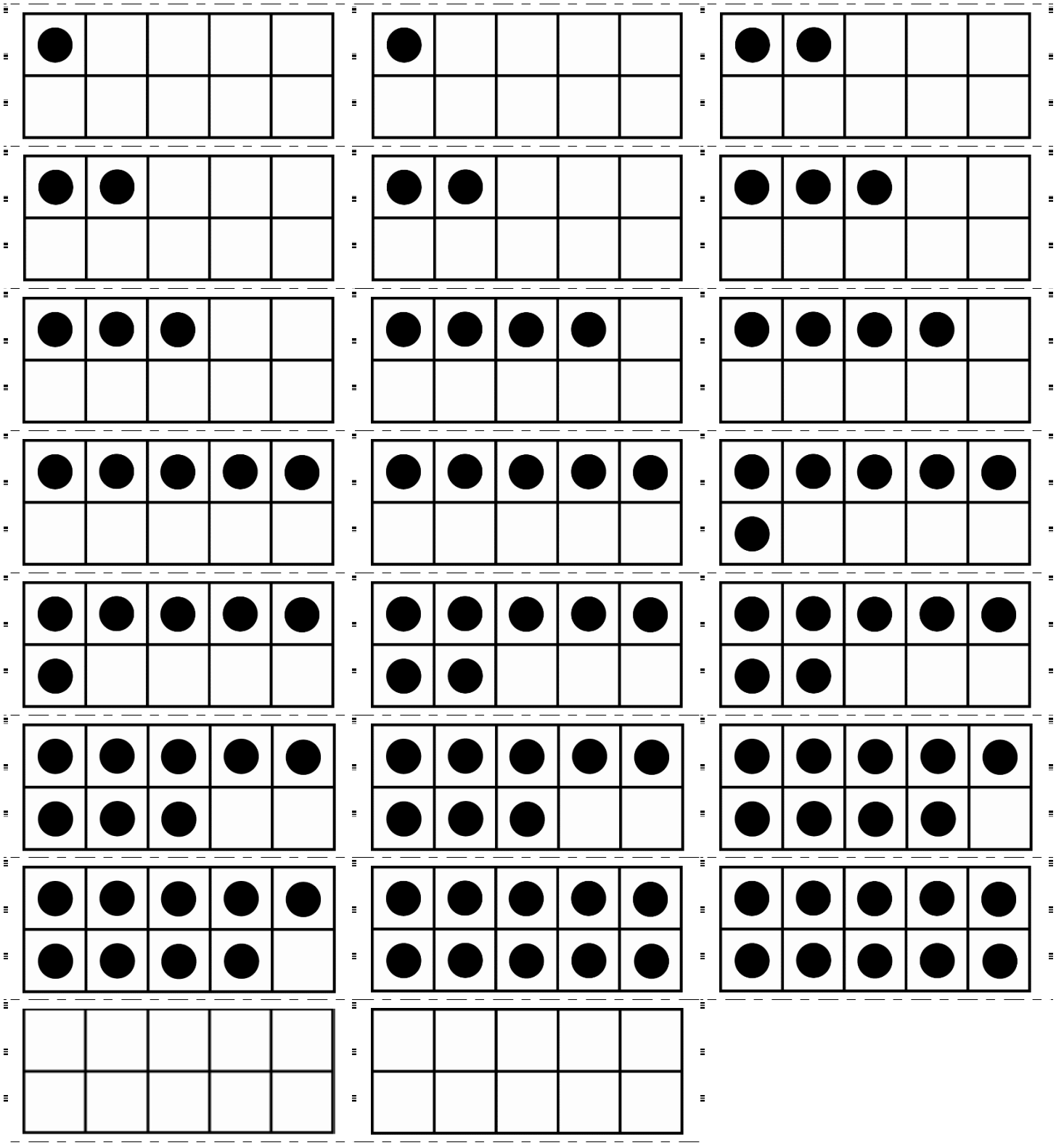
3 9 + 9 = _____

4 16 – 4 = _____

5 6 + 8 = _____

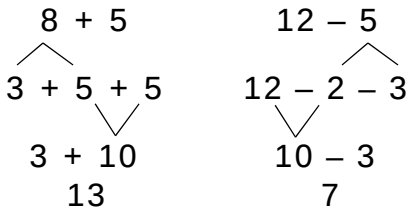
6 17 – 7 = _____

10-Frame Cards



Station 3

- Use “make a 10” or “decompose to a 10” to solve the facts below.



  - Record a solution for each fact.

1 9 + 6 = _____

2 15 – 8 = _____

3 7 + 5 = _____

4 14 – 7 = _____

5 8 + 4 = _____

6 11 – 3 = _____

Generate an Addition or Subtraction Problem

Materials:

- **Equation Cards** – One card per group of students, cards may be repeated
- **Picture Cards** (optional) – One card per group of students, cards may be repeated
- Chart paper
- Tape or glue
- Markers

Groups of 2-3 students

1. Distribute an **Equation Card**, chart paper, and a marker to each group of students.
2. Prompt students to attach their card to the chart paper.
3. Prompt students to write a problem that could be solved using the given equation. If a group of students needs support in generating a context for their problem, distribute a **Picture Card** to that group.
4. Once students have written their problem, prompt students to trade posters with another group. The other group should have a different **Equation Card**.
5. Prompt students to discuss similarities and differences between their word problems.
6. Prompt students to solve the problem on the poster, then return the poster to the original group.
7. The original group should check and verify the solution, and make modifications if necessary.
8. Whole group: Prompt students to share their word problems and explain their problem situation represents the equation.

Debriefing Questions:

- How does your problem situation represent the equation?

Equation Cards and Picture Cards

Cut along the dotted lines.

Card A

$127 + \square = 635$

Card G

$432 + \square = 719$

Card B

$224 - \square = 28$

Stickers

Card C

$425 + 61 = \square$

Books

Card D

$245 - 126 = \square$

Pennies

Card E

$\square + 49 = 83$

Cupcakes

Card F

$\square - 107 = 67$

Beads

Solving Addition and Subtraction Problems Using Objects

Materials:

- **Modeling and Solving Addition and Subtraction Problems**
- Set of base-10 blocks – One set per group of students
- Device with video capabilities – One per group of students
- Video connections for display of student created videos

Groups of 2-3 students

1. Distribute **Modeling and Solving Addition and Subtraction Problems** to each student and a set of base-10 blocks and a digital device to each group of students.
2. Prompt students to video record their problem-solving process for each problem on **Modeling and Solving Addition and Subtraction Problems**.
3. Once students have completed the activity, prompt two different groups of students to share their problem-solving process with the whole group.
4. Debrief using the debriefing questions below.
5. Repeat step 3-4 for additional problems.

Debriefing Questions:

- How are the problem-solving processes similar? How are they different?
- Is there another way to solve the problem? If so, how?

Modeling and Solving Addition and Subtraction Problems

- Work with your group to solve each problem using the base-10 blocks.
- Record your problem-solving process.

1 Samuel Elementary is ordering graduation caps for every kindergarten and grade 5 student.

- There are 167 students enrolled in kindergarten.
- There are 182 students enrolled in grade 5.
- Currently 75 students have been measured for their cap size.

How many students still need to be measured for their cap size?

2 Samuel Elementary collected 94 coats in June and 246 coats in July. In August, the school donated 304 coats to a local charity. How many coats does Samuel Elementary have after the donation?

Solving Addition and Subtraction Problems Using Representations

Materials:

- **Problem Solving with Representations**
- **Representation Cards** – One set per student
- Scissors
- Tape or glue
- Highlighters or colored pencils (optional)

Prompt students to complete **Problem Solving with Representations** using the **Representation Cards**.

Optional activity:
Prompt students to color code the problem and the corresponding representation. For example: For Problem 1, prompt students to highlight the words “295 blue dresses” using a blue highlighter and then prompt students to color the portion of the strip diagram that represents the 295 blue dresses.

Debriefing Questions:

- How is the problem situation represented in the model?
- What operations could be used to solve the problem?
- How does the model help you determine the operations?
- How did you sequence the operations? Why?
- Could you have used a different sequence of operations to solve the problem? What would the sequence of operations be? How does the model help you determine the different sequence?

Problem Solving with Representations

- Determine which **Representation Card** can be used for each situation.
- Solve the problem.

1 Max's Dress Shop has 867 dresses.

- There are 295 blue dresses.
- There are 354 red dresses.
- The rest of the dresses are white.

How many white dresses are in Max's Dress Shop?

Representation:

Answer:

2 Jaleesa had 325 seashells in her collection.

- She gave away 295 of the seashells.
- Then she found 125 more seashells.

How many seashells does Jaleesa have now?

Representation:

Answer:

3 On Saturday, the Sub Shop made 295 sandwich rolls.

- They sold 125 sandwich rolls.
- They baked 325 additional sandwich rolls at the end of the day.

How many sandwich rolls does the Sub Shop have to start the day on Sunday?

Representation:

Answer:

4 Tabatha's Chocolate Shop makes three kinds of chocolates every day.

- They make 295 white chocolates.
- They make 325 dark chocolates.
- They make 354 milk chocolates.
- The shop sold 867 of the chocolates.

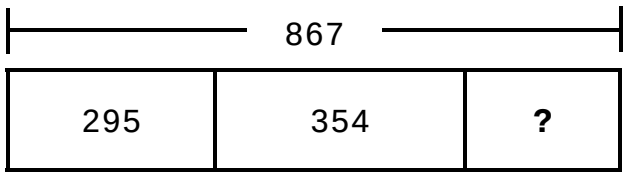
How many chocolates does Tabatha's Chocolate Shop have now?

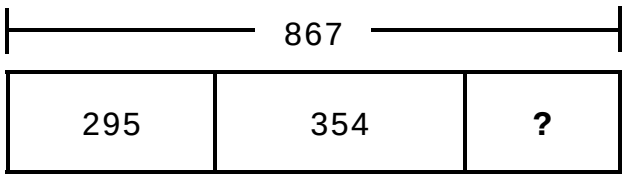
Representation:

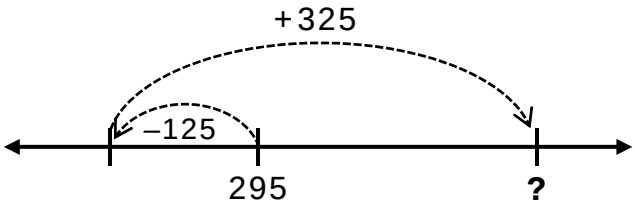
Answer:

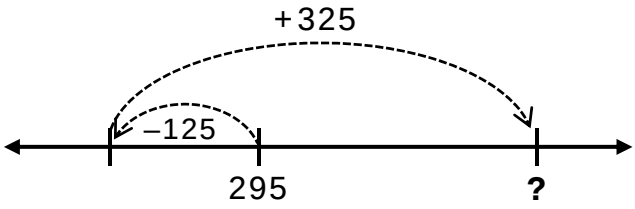
Representation Cards

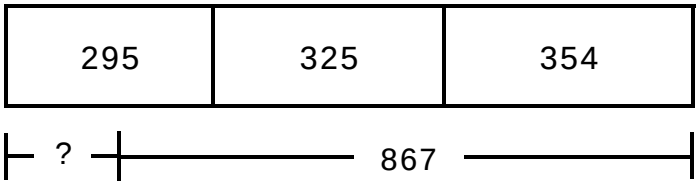
Cut along the bold dotted lines. Two sets are provided.

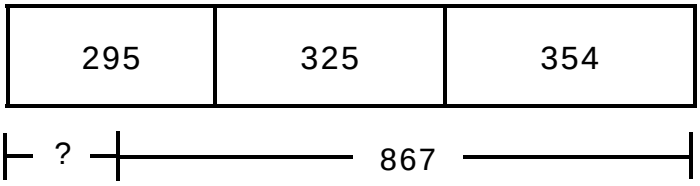


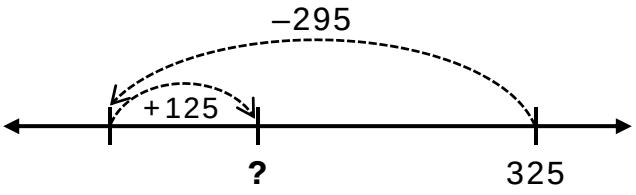


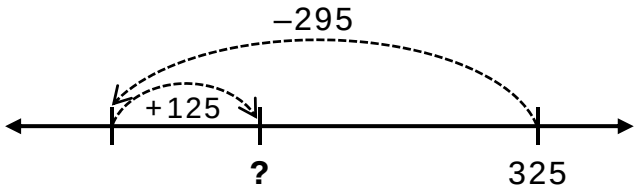












Solving Addition and Subtraction Problems Using Mental Strategies

Materials:

- **Ms. Santana's Students** for display
- **Conversation Starter Card** – One per group of students
- **Strategy Cards** – One set per group of students
- Scissors

1. Display **Ms. Santana's Students**.
2. Prompt students to solve the problem and then discuss their solution strategies.
   Note: The intended focus is for students to share their problem-solving strategies and not the solution.
3. Distribute a set of **Strategy Cards** and a **Conversation Starter Card** to each group of students.
4. Explain to students that the **Strategy Cards** represent the work of the six students in Ms. Santana's class.
5. Prompt students to sort the cards based on the similarities and differences that they notice among the solution processes and use the **Conversation Card** to guide the discussion as the cards are sorted.
6. Debrief using the debriefing questions and a set of **Strategy Cards** for display, while prompting groups of student to share their groupings and rationales.

Debriefing Questions:

- Which cards did you group together?
- What do the cards in this group have in common?
- What are the differences in the solution strategies *within* this group?
- What makes one group of cards different from another?

Ms. Santana's Students

Ms. Santana asked her students to write an equation to represent the problem below.

- Tina had 354 baseball cards.
- Carlos gave Tina 209 baseball cards.
- Tina gave 25 baseball cards to her younger sister.

How many baseball does Tina have now?

All six students wrote the equation $354 + 209 - 25 = \square$ to represent this problem.

Each student solved the problem in a different way.

Ryan's Jellybeans

Use your number sense and mental strategies to solve the problem.

Ryan had some jellybeans. He ate 27 of the jellybeans. Then he bought a new pack of 134 jellybeans. Now Ryan has 465 jellybeans. How many jellybeans did Ryan have at the beginning?

Conversation Starter Cards

Cut along the dotted lines. Two cards are provided.

Conversation Starters

What do the strategies have in common?

- The students in this group show . . .

How are the strategies *different*?

- This student seems to be thinking about . . .

What makes one group of cards different from another?

- These students all seem to be thinking about . . .
- The students in the other group seem to be thinking more about . . .

Conversation Starters

What do the strategies have in common?

- The students in this group show . . .

How are the strategies *different*?

- This student seems to be thinking about . . .

What makes one group of cards different from another?

- These students all seem to be thinking about . . .
- The students in the other group seem to be thinking more about . . .

Strategy Cards

Cut along the dotted lines.

Student A

$$354 + 209$$
$$(300 + 50 + 4) + (200 + 9)$$
$$(300 + 200) + 50 + (4 + 9)$$
$$500 + 50 + 13$$
$$550 + 13$$
$$563$$

$$563 - 25$$
$$+5 \quad +5$$
$$568 - 30$$
$$538$$

Tina has 538 baseball cards.

Student B

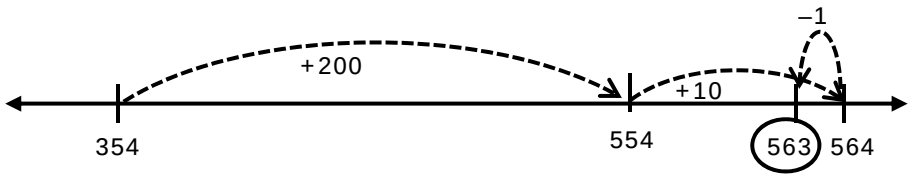
$$354 + 209$$
$$+6 \quad -6$$
$$360 + 203$$
$$563$$

$$563 - 25$$
$$(500 + 50 + 13) - (20 + 5)$$
$$500 + 30 + 8$$
$$538$$

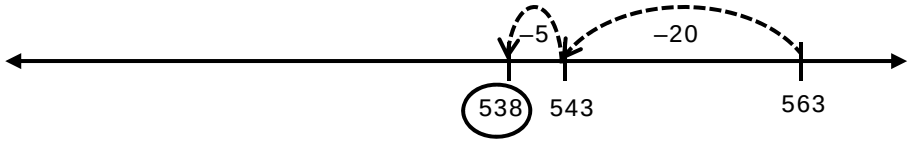
Tina has 538 baseball cards.

Student C

$354 + 209 = \square$



$563 - 25 = \square$



Tina has 538 baseball cards.

Student D

$354 + 209$

$(350 + 4) + (200 + 9)$

$550 + (4 + 9)$

$550 + 13$

563

$563 - 25$

$(550 + 13) - 25$

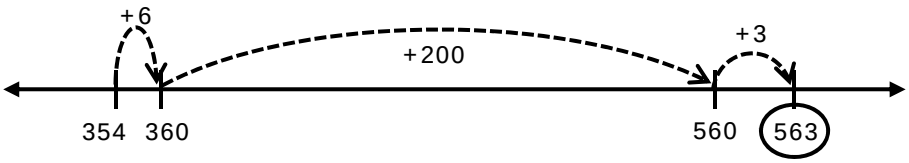
$525 + 13$

538

Tina has 538 baseball cards.

Student E

$354 + 209 = ?$



$563 - 25$

+2

$565 - 25$

540

−2

538

Tina has
538 baseball cards.

Student F

$354 + 209$

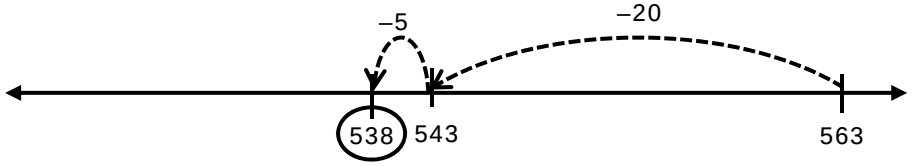
+1

$354 + 210$

564

−1

563



Tina has 538 baseball cards.

Solving Addition and Subtraction Problems Using Mental Strategies

Materials:

- **Ryan's Jellybeans**

1. Prompt students to complete **Ryan's Jellybeans** individually.
2. Prompt students to find a partner using Hands Up-Pair Up. Once a partner has been found, prompt students to complete a think-aloud describing the thinking they used to solve the problem.
3. Allow 1-2 groups to share their think-alouds with the whole group.

Hands Up-Pair Up:

- When prompted, students will stand up, put one hand up high, and start walking around the room.
- When the teacher says "stop," the students will stop, pair-up, and high-five the person closest to him or her.
- Students should find a place to sit with their new partner and complete the think-aloud.

Debriefing Questions:

- How were the think-alouds similar?
- How were the think-alouds different?
- How did you make use of mathematics vocabulary in your think-aloud?
- How did you use number sense and mental strategies to solve the problem?

Solving Addition and Subtraction Problems

Materials:

- **4-2-1: Solving Addition and Subtraction Problems**

Groups of 4 students, followed by groups of 2 students, followed by individual work

1. Prompt students to form groups of four and solve problem 1 on **4-2-1: Solving Addition and Subtraction Problems**.
2. Prompt students to solve the problem using four different methods.
3. Once students have completed problem 1, prompt students to form groups of two and complete problem 2 using two different methods.
4. Once students have completed problem 2, prompt students to work independently to complete problem 3.

Debriefing Questions:

- What method did you use to solve the problem? Why?

4-2-1: Solving Addition and Subtraction Problems

<table>
<tr><th colspan="2">Group of 4</th></tr>
<tr><td colspan="2">Problem 1
Vi, Marcie, and Jackson made cookies to sell during the fall festival.

• Vi made 62 chocolate chip cookies.
• Marcie made 46 peanut butter cookies.
• Jackson made 124 sugar cookies.

They sold a total of 156 cookies at the fall festival. How many cookies were not sold?</td></tr>
<tr><td>Method 1</td><td>Method 2</td></tr>
<tr><td>Method 3</td><td>Method 4</td></tr>
</table>

Group of 2	
Problem 2 Max had $263 in his saving account. He withdrew $128 to purchase video equipment. Then he deposited $342 of his earnings into his saving account. How much money does Max have in his savings now?	
Method 1	Method 2

On My Own!
Problem 3 Stella had some string. She used 126 inches of the string for an art project and 369 inches of string for a playground project. Stella has 26 inches of string left. How many inches of string did Stella have before using it on the art project and on the playground project?

Solving Addition and Subtraction Problems

Materials:

- **Solving Addition and Subtraction Problems: Scavenger Hunt**
- **Solving Addition and Subtraction Problems: Scavenger Hunt Posters** – for display
- Tape

1. Display the **Solving Addition and Subtraction Problems: Scavenger Hunt Posters** randomly around the classroom.
2. Prompt groups of students to stand by each poster.
3. Prompt students to solve the problem on the bottom of the poster on **Solving Addition and Subtraction Problems: Scavenger Hunt** in the workspace provided.
4. Prompt students to then find their solution on the top of another poster. That poster will display the next problem to solve.
5. Continue this process for the remaining problems.

Debriefing Questions:

- How did you determine the solution?
- What strategies did you use to solve the problem, if any?
- What model(s) did you use to represent the problem situation, if any?
- How is the problem situation represented in your model?

Solving Addition and Subtraction Problems: Scavenger Hunt

Poster	Work Space	Solution

Check Point: Solving Addition and Subtraction Problems

1 Franklin Elementary School started the year with 257 second grade students. During the year, some students moved away from the school. Some students moved to the school.

- 15 second grade students moved to a different school.
- 79 students moved into the second grade at Franklin Elementary School.

How many students were in second grade at the end of the year?

2 James and Eric each have a collection of baseball cards and soccer cards.

- Eric has 152 more cards than James.
- James has 136 baseball cards.
- James has 227 soccer cards.

How many cards does Eric have in his collection?

A

341

Kimberly has a collection of tea sets.

- She bought 26 tea sets at the state fair.
- Kimberly sold 12 tea sets online.
- She now has 264 tea sets.

With how many tea sets did Kimberly start?

B

528

Petra, Giovanni, and Kellan are playing a card game.

- Petra collected 254 points.
- Giovanni collected 145 points.
- Kellan collected 263 points.

How many more points did Petra and Kellan collect together than Giovanni?

C

475

Andrew had $639. He spent $256 on a video game controller. He also spent $369 on a monitor. How much money does Andrew have now?

D

250

Zachary had $228 in his savings account. On Friday, he deposited $250 of his birthday money into his savings account. On Saturday, Zachary deposited $50 of his babysitting money into his savings account. How much money does Zachary have in his savings account?

E

14

Truman had some money in his savings account.

- He deposited $369 in his savings account on Sunday.
- He deposited $250 in his savings account on Tuesday.
- He now has $960 in his savings account.

How much money did Truman have in his savings account before he made the two deposits?

F

372

Vi was making spirit bracelets to sell at the school fair. She started with 861 ribbons. Some ribbons were red. Some ribbons were white.

- She used 214 red ribbons to make the bracelets.
- She used 172 white ribbons to make the bracelets.

How many ribbons did Vi have left after making the spirit bracelets?

1, 2, and 0 Facts

Activity/Game: **Spin a Fact**

- **Spinners**
- 1 large paperclip
- Pencils

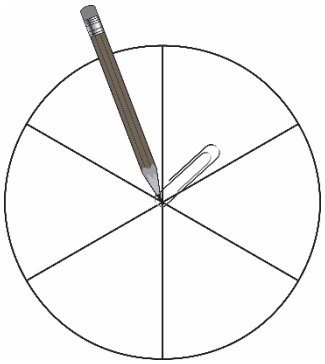
Practice Problems: 1, 2, and 0 Facts

Check Point: 1, 2, and 0 Facts

Debriefing Questions:

- What do you notice about the sums of numbers when one addend is 0? 1? 2?

Spin a Fact



- Use a paperclip to spin the spinner on **Spinner One**.
- Record the number in the start position.
- Use a paperclip to spin the spinner on **Spinner Two**.
- Record the number in the change position.
- Complete and record the addition or subtraction fact.
- Repeat nine more times.

*Note: If a 1 is spun on **Spinner One** for a subtraction problem, spin again for a different start number.*

_____ + _____ = _____ _____ — _____ = _____

_____ + _____ = _____ _____ — _____ = _____

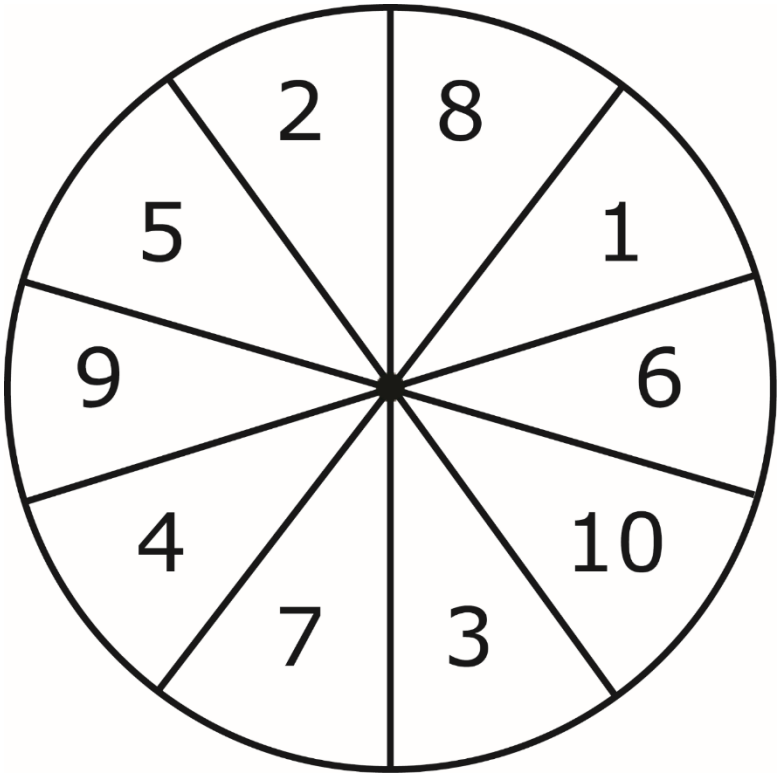
_____ + _____ = _____ _____ — _____ = _____

_____ + _____ = _____ _____ — _____ = _____

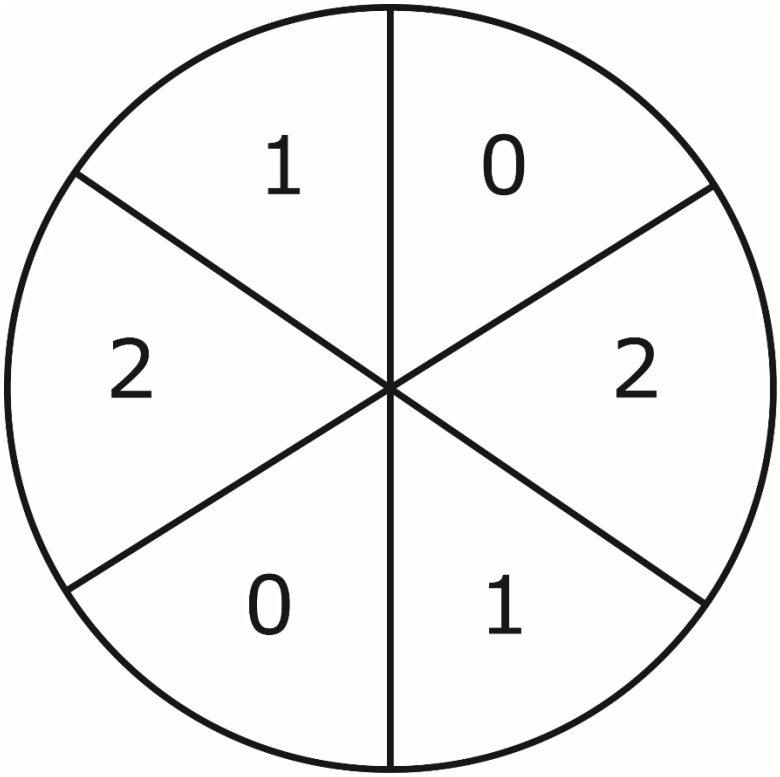
_____ + _____ = _____ _____ — _____ = _____

Spinners

Spinner 1:



Spinner Two:



Practice Problems: 1, 2, and 0 Facts

Record your answer to the questions below.

1 Amy had 2 books. She bought 8 books at the book fair. How many books does Amy have now?

2 Mimi had 10 purses. She gave 1 purse to her friend. How many purses does Mimi have now?

3 Jax had 8 baseball cards. He gave some baseball cards to his sister. Now, Jax has 2 baseball cards. How many baseball cards did Jax give his sister?

Record the missing number in each equation below.

4 $\square = 10 + 1$

5 $10 - \square = 10$

6 $\square + 18 = 19$

7 $15 - 2 = \square$

Cut along the dotted line. Two sets are provided.

Check Point: 1, 2, and 0 Facts

1 3 + 2 = _____

2 _____ — 0 = 10

3 1 + 8 = _____

4 7 —2 = _____

5 9 — _____ = 1

6 0 + 6 = _____

7 5 + 1 = _____

8 4 — _____ = 0

9 10 — _____ = 8

10 9 + _____ = 11

Check Point: 1, 2, and 0 Facts

1 3 + 2 = _____

2 _____ — 0 = 10

3 1 + 8 = _____

4 7 — 2 =_____

5 9 — _____ = 1

6 0 + 6 = _____

7 5 + 1 = _____

8 4 — _____ = 0

9 10 — _____ = 8

10 9 + _____ = 11

Adding and Subtracting 10 Facts

Activity/Game: **Using a Ten**

- **Set A Number Cards** (copy on colored cardstock)—One set per student
- **Set B Number Cards** (copy on a different color of cardstock)—One set per student

Practice Problems: Using a Ten

Check Point: Using a Ten

Debriefing Questions:

- What happens to the tens digit when adding or subtracting ten?
- What happens to the ones digit when adding or subtracting ten? Why?

Using a 10

- Choose one **Set A Number Card**.
- Add 10 to the number.
- Record the addition fact.
- Repeat 4 times.

_____ + 10 = _____

_____ + 10 = _____

10 + _____ = _____

_____ + 10 = _____

10 + _____ = _____

- Choose one **Set B Number Card**.
- Subtract 10 from the number.
- Record the subtraction fact.
- Repeat 4 times.

_____ — 10 = _____

_____ — 10 = _____

_____ — 10 = _____

_____ — 10 = _____

_____ — 10 = _____

1 When you added a 10 to a number, how did the number change?

2 When you subtracted 10 from a number, how did the number change?

Set A Number Cards

Cut along the bold dotted lines. Two sets are provided.

Copy on yellow cardstock.

0	1	2	3	4
5	6	7	8	9
10				

0	1	2	3	4
5	6	7	8	9
10				

Set B Number Cards

Cut along the bold dotted lines. Two sets are provided.

Copy on blue cardstock.

20	19	18	17	16
15	14	13	12	11
10				

20	19	18	17	16
15	14	13	12	11
10				

Practice Problems: Using a 10

Record your answer to the questions below.

1 There were 18 books on the shelf. Ms. Zing took 10 books off the shelf. How many books are left on the shelf now?

2 Safa had 6 cookies. Her mom gave her 10 more cookies. How many cookies does Safa have now?

3 Kyle had 15 pencils. He gave some pencils to his teacher. Now Kyle has 5 pencils. How many pencils did Kyle give his teacher?

Record the missing number in each equation below.

4 $\square = 10 + 7$

5 $16 - \square = 6$

6 $\square + 8 = 18$

7 $15 - 10 = \square$

Cut along the dotted line. Two sets are provided.

Check Point: Using a 10

1 10 + 2 = _____

2 19 — 10 = _____

3 17 — 10 = _____

4 8 + 10 = _____

5 10 + 7 = _____

6 14 — 10 = _____

7 3 + 10 = _____

8 14 —_____= 4

9 12 — _____ = 2

10 6 + _____= 16

Check Point: Using a 10

1 10 + 2 = _____

2 19 — 10 = _____

3 17 — 10 = _____

4 8 + 10 = _____

5 10 + 7 = _____

6 14 — 10 = _____

7 3 + 10 = _____

8 14 —_____= 4

9 12 — _____ = 2

10 6 + _____= 16

Doubling and Halving Facts

Activity/Game: **Doubling Facts**

- Number cube
- Colored pencils

Activity/Game: **Halving Facts**

- **Halving Facts Cards** (copy on colored cardstock)—One set per group of two
- **Difference Cards** (copy on a different color of cardstock)—One set per group of two

Practice Problems: Doubling and Halving Facts

Check Point: Doubling and Halving Facts

Debriefing Questions:

- What is the relationship between one addend and the sum when doubling a number?
- What is the relationship between the minuend/subtrahend and the difference when halving a number?

Doubling Facts

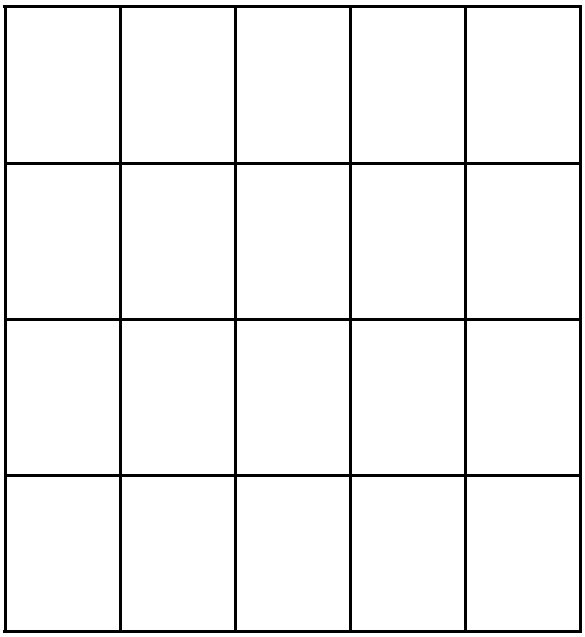
- Roll one number cube.
- Double the number rolled.
- Shade in the box to show the sum when the number rolled is doubled.
- Repeat until one of the sums has been shaded in five times.

2	**4**	**6**	**8**	**10**	**12**

Halving Facts

- Decide who will be Partner A and who will be Partner B.
- Mix up the sets of **Halving Fact Cards** and **Difference Cards**.
- Place the cards face down in four rows with five cards in each row.

For example:



- Partner A should turn over one card of each color.
- If the halving fact card matches the difference card, Partner A keeps the cards.
- If the cards do not match, turn the cards back over.
- Partner B should turn over one card of each color.
- If the halving fact card matches the difference card, Partner B keeps the cards.
- If the cards do not match, turn the cards back over.
- Continue until all cards have been matched.

Halving Facts Cards

Cut along the dotted lines.

2	4	6	8
$\frac{-1}{}$	$\frac{-2}{}$	$\frac{-3}{}$	$\frac{-4}{}$
10	12	14	16
$\frac{-5}{}$	$\frac{-6}{}$	$\frac{-7}{}$	$\frac{-8}{}$
18	20		
$\frac{-9}{}$	$\frac{-10}{}$		

Difference Cards

Cut along the dotted lines.

1	2	3	4
5	6	7	8
9	10		

Practice Problems: Doubling and Halving Facts

Record your answer to the questions below.

1 Pam had 8 bottles of water. Her mom gave her 8 more. How many bottles of water does Pam have now?

2 Zach had 18 baseball cards. He gave 9 baseball cards to his brother. How many baseball cards does Zach have now?

Record the missing number in each equation below.

3 $12 = 6 + \square$

4 $10 - \square = 5$

5 $\square + 10 = 20$

6 $\square - 7 = 7$

Cut along the dotted line. Two sets are provided.

Check Point: Doubling and Halving Facts

1 7 + 7 = _____

2 10 — 5 = _____

3 8 + 8 = _____

4 8 — 4 = _____

5 10 + 10 = _____

6 18 — 9 = _____

7 _____ + _____ = 10

8 _____ — 7 = 7

9 _____ + _____ = 18

10 _____ — 8 = 8

Check Point: Doubling and Halving Facts

1 7 + 7 = _____

2 10 — 5 = _____

3 8 + 8 = _____

4 8 — 4 = _____

5 10 + 10 = _____

6 18 — 9 = _____

7 _____ + _____ = 10

8 _____ — 7 = 7

9 _____ + _____ = 18

10 _____ — 8 = 8

Making a 10 and Subtracting from a 10 Facts

Activity/Game: **Can You Make a 10?**

- **Make a 10 Cards** (copy on cardstock)–Two copies per pair of students

Activity/Game: **Rolling with Tens**

- Number cube

Practice Problems: Making a 10 and Subtracting from a 10 Facts

Check Point: Making a 10 and Subtracting from a 10 Facts

Debriefing Questions:

- How does thinking of making 10 help when subtracting from ten?

Can You Make a 10?

- Decide who is Partner A and who is Partner B.
- Mix up the **Make 10 Cards**.
- Deal three cards to each player.
- Partner A should choose one card and decide what number is needed to make 10.
- Partner A should ask Partner B if he or she has a card with the number needed to make 10.
    - If a 10 is made, Partner A should place the match face up in front of him or her. It is Partner B's turn.
    - If a 10 is not made, Partner A should draw a card from the pile.
        - If a 10 is made, Partner A should place the match face up in front of him or her.
        - If a 10 is not made, it is Partner B's turn.
- Continue until no cards are left or no more tens can be made.

Make a 10 Cards

Cut along the dotted lines.

0	1	2	3
4	5	6	7
8	9	10	

Rolling With Tens

- Roll one number cube.
- What number should be added to the number rolled to make a 10?
- Record your equation.
- Repeat four more times.

_____ + _____ = 10

_____ + _____ = 10

_____ + _____ = 10

_____ + _____ = 10

_____ + _____ = 10

- Roll one number cube.
- Subtract the number rolled from 10.
- Record your equation.
- Repeat four more times.

10 —_____ = _____

10 —_____ = _____

10 —_____ = _____

10 —_____ = _____

10 —_____ = _____

Practice Problems: Making a 10 and Subtracting from a 10 Facts

Record your answer to the questions below.

1 Alex has 6 counters. She needs 10 counters. How many more counters does Alex need to make 10?

2 Dan had 10 brownies. He gave some to his brother, and now he has 4 brownies. How many brownies did Dan give his brother?

Record the missing number in each equation below.

3 $10 = \square + 3$

4 $10 - \square = 7$

5 $\square + 8 = 10$

6 $10 - \square = 4$

Cut along the dotted line. Two sets are provided.

Check Point: Making a 10 and Subtracting from a 10 Facts

1 7 + _____ = 10

2 10 — 5 = _____

3 _____ + 10 = 10

4 10 — _____ = 4

5 8 + 2 = _____

6 10 — 9 = _____

7 _____ + 5 = 10

8 10 — _____= 7

9 9 + _____ = 10

10 10 — 8 = _____

Check Point: Making a 10 and Subtracting from a 10 Facts

1 7 + _____ = 10

2 10 — 5 = _____

3 _____ + 10 = 10

4 10 — _____ = 4

5 8 + 2 = _____

6 10 — 9 = _____

7 _____ + 5 = 10

8 10 — _____= 7

9 9 + _____ = 10

10 10 — 8 = _____

Using What I Know

Activity/Game: **Using Tens**

Practice Problems: Using Tens

Check Point: Using Tens

Activity/Game: **Using Near Doubles and Halving**

Practice Problems: Using Near Doubles and Halving

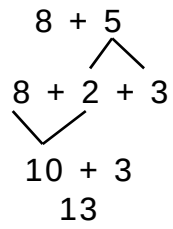
Check Point: Using Near Doubles and Halving

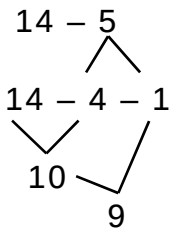
Debriefing Questions:

- When trying to make a 10 with the first addend, what thinking needs to happen when decomposing the second addend?
- When one addend is one more or one less than the other addend, how can doubles be used to find the sum?

Using Tens

Look at the examples below.





Use the examples to help you decompose one of the numbers to make a 10.

9 + 6

_____ + _____ + _____

10 + _____

_____

7 + 8

_____ + _____ + _____

10 + _____

_____

4 + 9	6 + 8	8 + 9

15 — 9

15 — ____ — ____

10 — _____

_____

17 — 8

17 — ____ — ____

10 — _____

_____

13 — 7	15 — 6	12 — 9

Practice Problems: Using Tens

Record your answer to the questions below.

1 Jack has 9 sugar cookies and 4 chocolate chip cookies. How many cookies does Jack have altogether?

2 Mia had 15 dollars. She spent 7 dollars. How much money does Mia have now?

3 There were 8 cows in the brown barn. There were 18 cows in the red barn. How many more cows were in red barn than in the brown barn?

4 There were 14 birds in a tree. Then 6 birds flew away. How many birds are in the tree now?

Copy on color paper.
Cut along the dotted line. Two sets are provided.

Check Point: Using Tens

1 9 + 6 = _____

2 15 — 6 = _____

3 7 + 9 = _____

4 16 — 9 = _____

5 8 + 4 = _____

6 12 — 8 = _____

7 7 + 8 = _____

8 14 — 5 = _____

9 9 + 5 = _____

10 17 — 8 = _____

Check Point: Using Tens

1 9 + 6 = _____

2 15 — 6 = _____

3 7 + 9 = _____

4 16 — 9 = _____

5 8 + 4 = _____

6 12 — 8 = _____

7 7 + 8 = _____

8 14 — 5 = _____

9 9 + 5 = _____

10 17 — 8 = _____

Using Near Doubles and Halving

- Choose a fact in bold.
- Determine if the strategy beneath the fact is a near doubles strategy or a near halving strategy.
- Write the fact with its strategy in the appropriate column.
- Repeat the process for all bolded facts.

Near Doubles	Near Halving

6 + 8 6 + 6 + 2	**5 + 6** 5 + 5 + 1
16 — 7 16 — 8 + 1	**18 — 8** 18 — 9 + 1
20 — 9 20 — 10 + 1	**7 + 8** 7 + 7 + 1
8 + 9 9 + 9 — 1	**14 — 8** 14 — 7 — 1

Circle the word that completes each statement.

All the facts under “near doubles” are **addition / subtraction** facts.

All the facts under “near halving” are **addition / subtraction** facts.

Practice Problems: Using Near Doubles and Halving

Record your answer to the questions below.

1 Cody found 7 spiders. Tyler found 8 spiders. How many spiders did Cody and Tyler find?

2 Payton bought 12 hamburgers. She gave 7 hamburgers to her friends. How many hamburgers does Payton have now?

3 There were 8 ducks at a pond. Then 9 more ducks flew to the pond. How many ducks are at the pond now?

4 Abby had 16 grapes. She ate 7 grapes. How many grapes does Abby have now?

Copy on different color paper than Check Point: Using Tens.
Cut along the dotted line. Two sets are provided.

Check Point: Using Near Doubles and Halving

1 8 + 6 = _____

2 16 — 7 = _____

3 7 + 8 = _____

4 14 — 8 = _____

5 6 + 5 = _____

6 12 — 5 = _____

7 6 + 7 = _____

8 12 — 5 = _____

9 9 + 8 = _____

10 18 — 7 = _____

Check Point: Using Near Doubles and Halving

1 8 + 6 = _____

2 16 — 7 = _____

3 7 + 8 = _____

4 14 — 8 = _____

5 6 + 5 = _____

6 12 — 5 = _____

7 6 + 7 = _____

8 12 — 5 = _____

9 9 + 8 = _____

10 18 — 7 = _____

Fact Practice

Activity/Game: **Head Facts**

- **Number Cards** (copy on cardstock)–Two sets of cards per group of three

Activity/Game: **Four in a Row**

- **Number Spinner**–1 for each group of two
- Large paperclip–1 for each group of two

Activity/Game: **Who Has More?**

- **Fact Cards** (copy on cardstock)–One set for each group of two

Activity/Game: **Using Technology Tools to Explore Math Facts**

Head Facts

Game 1:

- Decide who will be Person A, Person B, and Person C.
- Shuffle the **Number Cards**.
- Person A and Person B will each choose one card and place it on their foreheads without looking at the card, but the other two partners can see the card.
- Person C will say the sum of the cards.
- Person A and B have to determine the correct addends that would make the equation true.

Game 2:

- Shuffle the **Number Cards**.
- Person A and Person B will each choose one card and place it on their foreheads without looking at the card, but the other two partners can see the card.
- Person C will say the difference of the cards.
- Person A and B have to determine the correct numbers that would make the equation true.

Number Cards

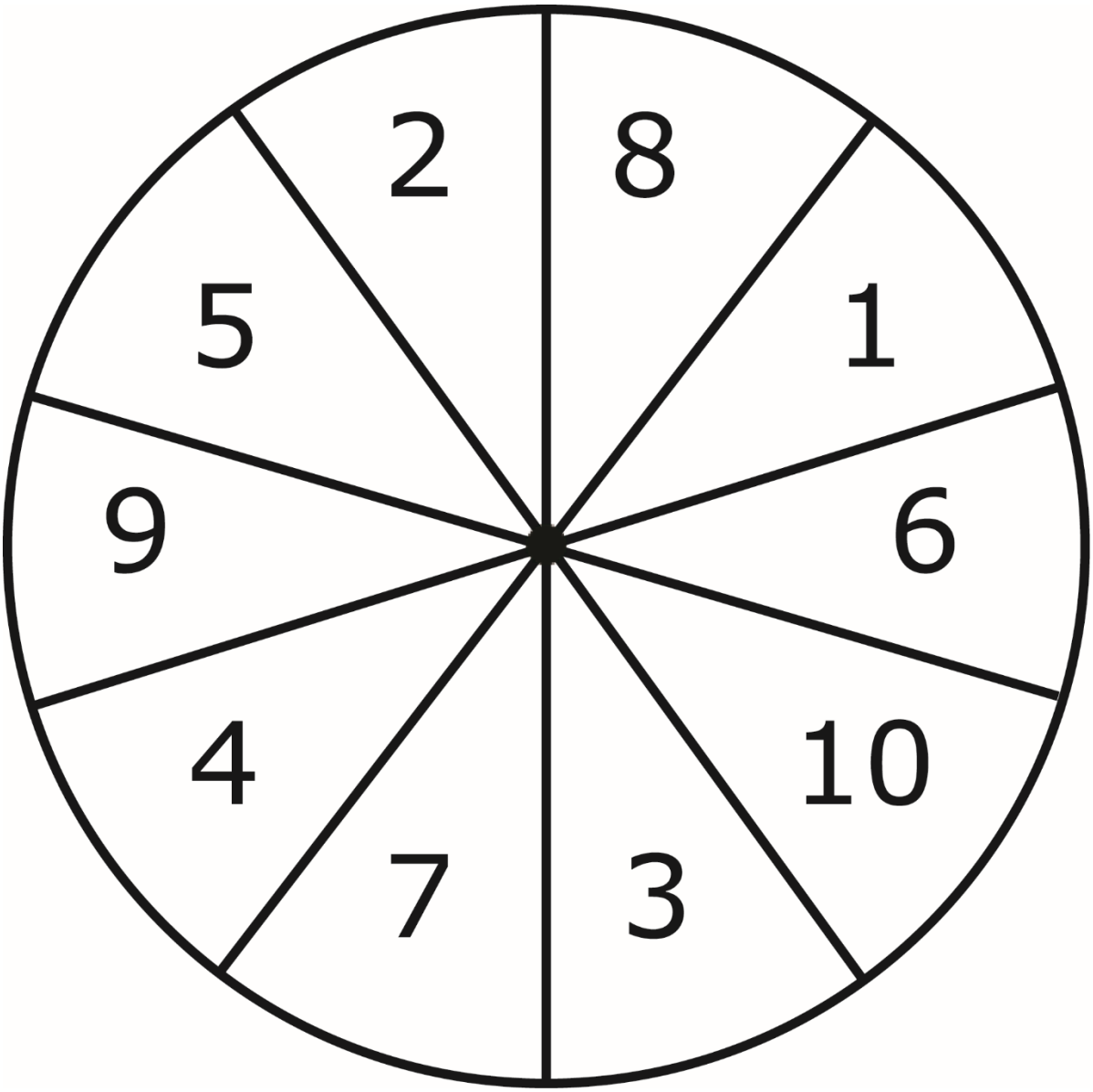
Cut along the dotted lines.

0	1	2	3
4	5	6	7
8	9	10	

Four in a Row

- Write a different number (0–20) in each square on your own paper.
- Partner A spins the Spinner.
- Partner B spins the Spinner.
- Decide if you want to add or subtract the two numbers. Color in the sum or the difference if it is written on your board.
- Repeat until one person has colored in four in a row.
- Play again!

Number Spinner



Who Has More?

- Mix up the **Fact Cards**. Make a stack of 8 cards for each player.
- Place the stacks face down.
- At the same time, each player turns one card face up.
- Determine the sum or difference.
- The person with the greatest sum or difference collects both cards.
- Repeat until you run out of cards.
- The person who collects the most cards wins.

Fact Cards

Cut along the dotted lines.

14 – 6	9 + 4	20 – 6
3 + 7	15 – 10	19 – 2
10 + 6	18 – 7	7 + 8
16 – 9	5 + 4	9 + 10
6 + 6	10 + 10	9 + 9
14 – 8		

Using Technology Tools to Explore Math Facts

Fact Monster

1. Scan the QR Code or enter the URL into your web browser.
2. Choose a level to practice addition facts.
3. Choose other operations to further explore the site.

http://bit.ly/1hto5Kw

Add and Subtract Numbers Up to 20

1. Scan the QR Code or enter the URL into your web browser.
2. Enter the sum or difference and click Submit.

http://bit.ly/24VKr05