

April Number Corner - Gr. 3

Calendar Grid Pocket Chart
Remember to consult a calendar for the starting day of this month and year.

Calendar Grid Observations Chart
You might use 24" x 36" chart paper.
If you laminated a sheet in previous months, you can erase and reuse it now.

Calendar Collector Collection & Record Sheet
Students will spin for and collect fractions of an hour in this month's Calendar Collector. See the Preparation section of the workout for details.

April Materials Needed

Copies	Run copies of Teacher Masters T1-T14 according to the instructions at the top of each master.
	If students do not have their own Number Corner Student Books, run a class set of pages 54-68.
	Run a single display copy of Number Corner Student Book pages 61-68.
Charts	Prepare this month's Observations Chart according to Preparation instructions in the Calendar Grid workout.
	Prepare this month's Record Sheet according to Preparation instructions in the Calendar Collector workout.
Special Items	Before Number Line Activities 1 and 2, prepare the Put It on the Line, Game 1 and Game 2 Teacher Masters by covering each problem with a sticky note. If you are using an overhead projector, you may need to use a stack of sticky notes or card stock to ensure the problems are hidden.
	Before Number Line Activity 3, get enough sticky notes for pairs of students to cover the problems on the Put It on the Line, Game 3 Teacher Master.

Vocabulary:
A.M.
Analog
Analog clock
Area model of multiplication*
Array*
Commutative property of multiplication*
Denominator*
Digital
Divide*
Dividend*
Division*

Divisor*
Equation*
Equivalent fraction*
Factor*
Fourths
Fraction*
Half*
Half-hour
Hour (hr.)
Inverse relationship
Minute (min.)
Multiple*
Multiplication
Multiply*
Number line*
Numerator*
Partial products
P.M.
Product*
Quarter-hour
Quotient*
Second (sec.)
Sixths
Third of an hour
Thirds
Twelfths
Whole
*identifies terms that have word resource cards

Literature Connections:

- Pizza Pizzazz by Carol A. Losi
- Jump, Kangaroo, Jump by Stuart J. Murphy
- At School: Telling Time by the Half-Hour by Alice Proctor
- At the Zoo: Telling Time by the Quarter-Hour by Alice Proctor
- My Half Day by Doris Fisher

Date	Description of Part and Whole	Fraction	Observations

Date	What was spun?	Number of Minutes	Fraction of an hour	Total Minutes Collected	Hours and Minutes Collected as a Fraction or Mixed Number

April: Day 1

Need:

- Calendar Markers
- Observation Chart
- Word Resource cards: *numerator, denominator, equivalent fractions*

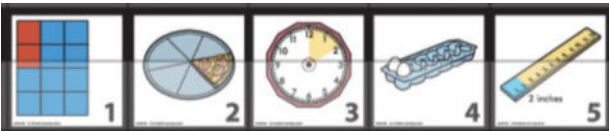
C. Grid: 1-Introducing the Calendar Grid Markers (p. 7)

1. Turn over the first calendar marker and ask students to study it quietly.
2. Have students share observations.
3. Post any other markers to bring the calendar up to date. Give students time to make observations and predictions.
4. Introduce the Observation Chart. With participation from students, fill in the chart for the dates posted so far. (Encourage students to think about different fraction ideas)
5. Review important vocabulary: *numerator, denominator, and equivalent*
6. Ask students to make predictions about future calendar markers.

numerator: the top number in a fraction, which shows how many equal parts are to be counted; also, the dividend

denominator: the bottom number in a fraction, which shows into how many equal parts the whole is divided; also, the divisor

equivalent fractions: two or more different fractions that represent the same quantity



Date	Description of Part and Whole	Fraction	Observations
1	2 out of 12 tiles are red	$\frac{2}{12}$	less than half are red.
2	There's 1 piece on the pan. There were 6 pieces in the whole pizza.	$\frac{1}{6}$	There were 6 pieces. 5 are gone.
3	10 minutes are filled in. There are 60 minutes in all	$\frac{10}{60}$	There are 12 numbers around the clock and it's filled in to 2, so you can also write $\frac{2}{12}$.

April: Day 2

Need:

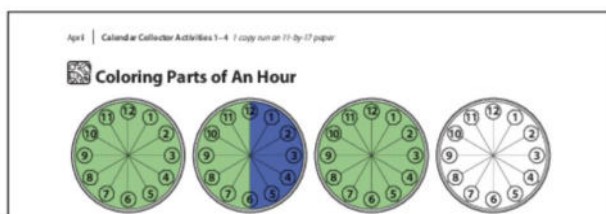
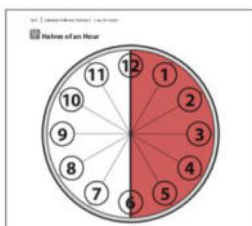
- Halves of an Hour Teacher Master
- Spinner overlay
- How Many Parts? Spinner
- Coloring Parts of an Hour Teacher Master
- Record Sheet
- Markers (2 different colors)

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: 1-Collecting Half-Hours (p. 14)

1. Explain that students will collect fraction of an hour this month. For the first 7 days, they will collect half-hours.
2. Use the Halves of an Hour Teacher Master to talk about halves of an hour.
 - a. How many minutes are in a whole hour? Half-hour? Two halves of an hour? Three halves of an hour?
3. Update the Calendar Collector for all the school days that have passed so far this month.
 - a. Use a spinner overlay on the How Many Parts? Spinner to see how many halves to add.
 - b. Color in that number of half-hours on the Coloring Parts of an Hour Teacher Master.
 - c. Fill in the information on the Calendar Collector Record Sheet.
4. Repeat for each school day that has passed this month. Alternate colors each day so students can see each number of halves added to the collection.



Date	What was spun?	Number of Minutes	Fraction of an hour	Total Minutes Collected	Hours and Minutes Collected as a Fraction or Mixed Number
1	3	90	$\frac{30}{60}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$	90	$\frac{90}{60}, 1\frac{1}{2}$
2	1	30	$\frac{30}{60}, \frac{1}{2}, \frac{1}{2}$	120 (90 + 30 = 120)	2 hours, $\frac{120}{60}$, $1\frac{1}{2} + \frac{1}{2} = 2$, $\frac{90}{60} + \frac{30}{60} = \frac{120}{60}$
3	2	60	$\frac{60}{60}, 1$	180 (120 + 60 = 180)	3 hours, $\frac{180}{60}$, 1 hour = 2 hours = 3 hours, $\frac{120}{60} + \frac{60}{60} = \frac{180}{60}$

April: Day 3

Need:

- Quick Facts Worksheet Teacher Master
- Quick Facts Worksheet A-C student book pages 56-58

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Comp. Fluency: Introducing Quick Facts (p.21)

1. Display the Quick Facts Worksheet Teacher Master while students open to Quick Facts Worksheet A in their number corner student books. Explain that this month, students will practice getting faster and more familiar with their multiplication and division facts.
2. Give students a minute to examine the sheet and describe what they notice. Then answer any questions.
3. Have students write 0 in the multiplier box. Explain that a multiplier is a number by which you multiply other numbers.
4. Have students record their answers in each box and put down their pencil as soon as they are done.
5. Using Quick Facts Worksheet B, repeat with the multiplier 1. Review the identity property of multiplication (the product of 1 and any number is that number).
6. Last, using Quick Facts Worksheet C, tell them to record a 2 in the multiplier box. Model the recording process by writing your name on the sheet, filling in the 2 as the multiplier, and then multiplying the top row of number by 2 with students' help.
7. Tell students that they will have 4 minutes to complete as many of the problems as they can.
 - a. To keep track of time, you will write 0-1 on the board. After a minute, you'll write 1-2. After 2 minutes, you'll write 2-3. After 3 minutes, you'll write 3-4. After 4 minutes, you'll tell them to stop.
 - b. When students have finished, they should turn their paper over and write the range of minutes on the board.
8. Start the timer and have students begin. At 4 minutes, have all students stop even if they are not done. If they did not finish, they should write 4+ in the How Many Minutes? box.
9. Then, demonstrate how to complete the division section at the bottom of the page. Write 10 different products from the grid in the dividend boxes. Then record a 2 as the divisor on each line. Last, work with students' help to enter the quotient along the top row. Students should then fill in their own sheets.
10. Collect student books and write the number correct on the top. Use the Checklist Teacher Master to keep track of mastered facts.

April | Computational Fluency Activity 1

NAME _____ DATE _____

Quick Facts Worksheet C

What's your multiplier?	How many minutes?	Number correct
2	1-2	35

1 Multiply each number in the grid by your multiplier. Write each product in the box.

10	5	7	3	6	1	0	4	2	10
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April: Day 4

Need:

- whiteboards & markers for each student
- Put It on the Line, Game 1 Teacher Master

C. Grid: Update

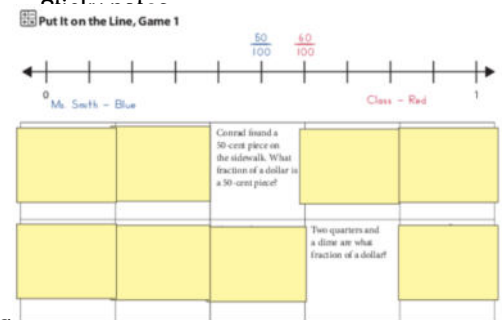
1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Number Line: 1-Introducing Put It on the Line (p. 30)

1. Let students know they will learn a new game called Put It on the Line.
2. Display the Put It on the Line, Game 1 Teacher Master (with sticky notes covering the 10 problems) to introduce the game.
 - a. Explain that the sticky notes cover problems that will be revealed as they play.
 - b. Ask students what number would go on the dashes between 0 and 1 on the number line. Do not label the number line right away; it will get filled in during the game.
1. Students or teams will take turns revealing any of the 10 problems on the game board, solving the problem, and recording the answer where it belongs on the number line. Each team should use a different color. Whatever numbers they write become points for them. After each team have solved 5 problems, estimate each team's total to predict the winner and then compute the exact totals to determine the winner.
2. Have students use their whiteboards to show their thinking while playing. Give students a few minutes to solve each problem quietly before sharing with a partner and the class. Record the answer and ask students to think of some equivalent fractions.
3. On your turn, students should still solve the problem on their whiteboards. Record your answer in a different color.
4. After all the questions have been answered, have students estimate their total and you total to predict who will win. Then have students confirm their predictions by adding each team's numbers.



April: Day 5

Need:

- Marked student Quick Facts Worksheets
- Student Book pages 61-62

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Solving Problems: 1-Solving & Discussing Problems (p. 37)

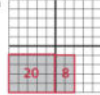
1. Display Student Book page 61. Read over each problem (complete 1a and 2a together if needed).
2. Return students' most recent Quick Facts papers and have them identify which problems were most challenging. They will select three of these to use on number 3.


a. On number 3, they should draw an array to represent the combination. Then, using the array to illustrate a strategy for calculating the product that works well for them.


1. Give students time to complete the student book pages.
1. In the last 5 minutes, discuss the equations students wrote for the story problems or by addressing any common points of confusion.

Multiplication & Division Problems 1 page 1 of 2

1 For each array, show how you can break it into smaller arrays to find the product. Then write a multiplication and division fact family for the array.

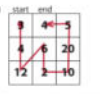
a  $4 \times 7 = 28$
 $7 \times 4 = 28$
 $28 \div 4 = 7$
 $28 \div 7 = 4$


b  $3 \times 8 = 24$
 $8 \times 3 = 24$
 $24 \div 3 = 8$
 $24 \div 8 = 3$


c  $6 \times 8 = 48$
 $8 \times 6 = 48$
 $48 \div 6 = 8$
 $48 \div 8 = 6$

Arrays may vary.

2 Complete each maze. Write equations below each one to show how you found the path from start to end.

a  $3 \times 4 = 12$
 $12 \div 6 = 2$
 $2 \times 10 = 20$
 $20 \div 5 = 4$

b  $3 \times 8 = 24$
 $12 + 6 = 2$
 $4 \times 7 = 28$
 $28 \div 14 = 2$

c  $8 \times 3 = 24$
 $24 \div 6 = 4$
 $24 \div 6 = 4$
 $4 \times 8 = 32$
 $32 \div 2 = 16$

Multiplication & Division Problems 1 page 2 of 2

3 Look over your last Quick Facts page and select three combinations that were challenging for you. Draw an array for each one, and show how you can divide the array into smaller arrays to find the product. **Work will vary.**



4 Mr. Garza had 24 flowers. He divided them equally and gave some flowers to each of his 4 sisters.

a Write an equation to represent this problem.

$$24 \div 4 = 6$$

b How many flowers did each sister get?

6 flowers

5 Patty is buying pears to share with her friends. She bought 3 bags. Each bag has 6 pears in it.

a Write an equation to represent this problem.

$$3 \times 6 = 18$$

b How many pears did Patty buy?

18 pears

6 CHALLENGE Write your own multiplication problem and include an equation.

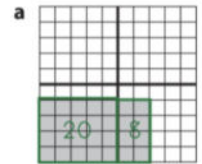
Work will vary.

7 CHALLENGE Write your own division problem and include an equation.

Work will vary.

Number Corner Student Book Page Examples

Array 1a



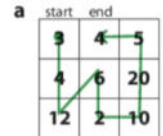
$$4 \times 7 = 28$$

$$7 \times 4 = 28$$

$$28 \div 4 = 7$$

$$28 \div 7 = 4$$

Math Maze 2a



$$3 \times 4 = 12$$

$$12 \div 6 = 2$$

$$2 \times 10 = 20$$

$$20 \div 5 = 4$$

April: Day 6

Need:

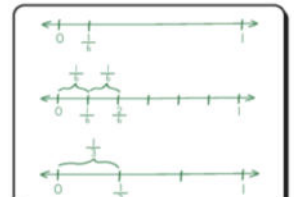
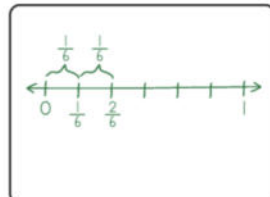
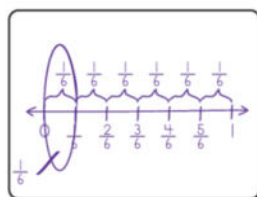
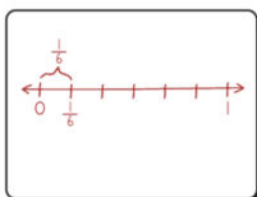
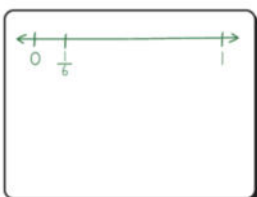
- whiteboards & markers for each student

C. Grid: 2-Representing Fractions on a Number Line (p. 9)

1. Update the Calendar Grid and Observation Chart.
2. Have students look at the second marker ($\frac{1}{6}$ pizza) and discuss how they know what fraction it represents.
3. Ask students to draw a number line on their whiteboard and show the fraction $\frac{1}{6}$ (they will draw 3 number lines total and should leave space for the next two)
4. Have students compare their number lines with each other and make observations.
5. Repeat with marker 7 ($\frac{2}{6}$ pizza).
6. Now have students focus on marker 6 and have students write the fraction represented by the red tiles.
 - a. Point out that the red tiles can represent $\frac{4}{12}$, $\frac{1}{3}$, or $\frac{2}{6}$ of the 12 tiles.
7. Have students draw a third number line on their whiteboard that is the same length as the other two.
 - a. Ask students what they notice about the number lines for $\frac{2}{6}$ and $\frac{1}{3}$.
8. Ask students if 2 slices of pizza are the same quantity as 4 red tiles.
 - a. Emphasize that we can only compare two fractions when the whole is the same.
 - b. Tiles and pizza are not the same. The number lines show that they are the same amount because they are both $\frac{1}{3}$ but they are not $\frac{1}{3}$ of the same thing.

Calendar Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.



April: Day 7

Multiplier or Range of Multipliers	Date	Time Taken	Correct Facts	Mastery? (at least 38 correct in 2 min. or less)
2	April 3	2 min.	35	No

Need:

- Quick Facts WS student book pg.58
- Quick Facts Tracking Sheet student book pg. 59
- Quick Facts Teacher Master (class set)
- Fact Families Teacher Master
- whiteboards & markers for each student

C. Grid: Update

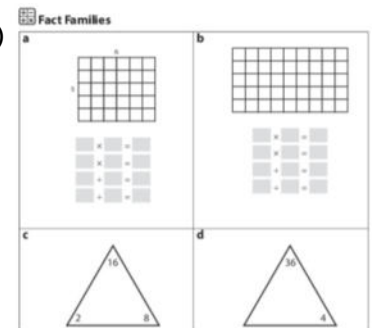
1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Comp. Fluency: 2-Multiplication & Division Fact Families (p. 23)

1. Have students open to Quick Facts Worksheet C where they used the multiplier 2 (These need to be marked before the lesson. If you don't have time, have students mark how many correct they got using the answer key.)
2. Display the Quick Facts Tracking Sheet. Explain that students will keep track of their progress with facts on the tracking sheet. Model how to fill in the first row. If students were able to answer 38 or more facts correctly in 2 minutes or less, they can put yes in the last column.
 - a. Students who answer yes, will move on to the multiplier 3. Students who answer no, will continue to work with multiplier 2. Let students know that they are working at their own pace. This is not a race or competition against the class.
3. Pass out a copy of the Quick Facts Worksheet Teacher Master. Some students will continue working with multiplier 2 while others will be moving on to multiplier 3.
4. Review the process for how you will keep track of time on the board. (0-1, 1-2, 2-3, and 3-4)
5. Give students 4 minutes to complete their worksheet. Then have them complete the division problems.
 1. Display the Fact Families Teacher Master and work with student input to complete the page together. Have students use their whiteboards.
 - a. Write the 4 equations that go with the 5x6 array in Part A.
 - b. Uncover Part B. Have students draw the array and label the dimensions on their whiteboards. Have students write the 4 equations (fact family) and then share.
 - a. Reveal Part C and have students write the 4 equations for the triangle.
 - b. Reveal Part D and explain that students need to find the missing number before writing the 4 equations.



April: Day 8

Need:

- Quarter of an Hour Teacher Master

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: 2-Collecting Quarter-Hours (p. 16)

1. Give students time to review the collection. Invite students to add equivalent fractions to the fraction column. Ask them to explain how they found the total amount of minutes and hours.
2. Explain for the next 7 days, they will collect quarter-hours. Explain that quarters are the same as fourths.
3. Display the Quarters of an Hour Teacher Master.
 - a. How many minutes are in one-quarter of an hour? Two-quarters of an hour? Three-quarters?
 - b. If one-quarter of an hour has passed, how many minutes are left in the hour?
4. Explain the difference between the phrases *a quarter to* and *a quarter past*.
5. Update the collection.
 - a. Spin the spinner and fill in that number of quarters.
 - b. Record the information on the record sheet.
6. Ask students how the collecting process will change now that they are collecting quarters instead of halves.
 - a. Can you collect a whole hour in a day? Why or why not?
 - b. Can you collect half an hour in a day? Why or why not?
 - c. How can you add $\frac{1}{2}$ and $\frac{1}{4}$ of an hour?
 - d. How many hours do you think we will collect in the seven days?

April: Day 9

Need:

-Marked student Quick Facts Worksheets

-Student Book pages 63-64

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Solving Problems: 1-Solving & Discussing Problems (p. 37)

1. Display Student Book page 63. Read over each problem (complete 1a and 2a together if needed).

2. Return students' most recent Quick Facts papers and have them identify which problems were most challenging. They will select three of these to use on number 3.

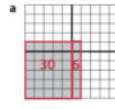
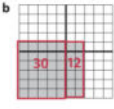
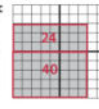
- a. On number 3, they should draw an array to represent the combination. Then, using the array to illustrate a strategy for calculating the product that works well for them.

1. Give students time to complete the student book pages.

1. In the last 5 minutes, discuss the equations students wrote for the story problems or by addressing any common points of confusion.

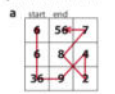
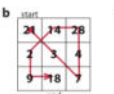

Multiplication & Division Problems 2 page 1 of 2

- 1 For each array, show how you can break it into smaller arrays to find the product. Then write a multiplication and division fact family for the array.

 $6 \times 6 = 36$ $36 \div 6 = 6$	 $6 \times 7 = 42$ $7 \times 6 = 42$ $42 \div 6 = 7$ $42 \div 7 = 6$	 $8 \times 8 = 64$ $64 \div 8 = 8$
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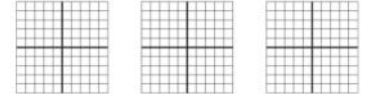
Arrays may vary.

- 2 Complete each maze. Write equations below each one to show how you found the path from start to end.

 $6 \times 6 = 36$ $36 \div 9 = 4$ $4 \times 2 = 8$ $8 \times 7 = 56$	 $21 \div 3 = 7$ $7 \times 4 = 28$ $28 \div 14 = 2$ $2 \times 9 = 18$	 $32 \div 4 = 8$ $8 \times 2 = 16$ $16 \div 4 = 4$ $4 \times 7 = 28$
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Multiplication & Division Problems 2 page 2 of 2

- 3 Look over your last Quick Facts page and select three combinations that were challenging for you. Draw an array for each one, and show how you can divide the array into smaller arrays to find the product. **Work will vary.**



- 4 Jake made cookies for his 7 friends. He made 56 cookies and wanted to give each friend the same number of cookies.

- a Write an equation to represent this problem.
 $56 \div 7 = 8$
- b How many cookies can Jake give each friend?
8 cookies

- 5 Ramona is making masks for a party. She wants each mask to have 8 feathers, and she has 32 feathers.

- a Write an equation to represent this problem.
 $32 \div 8 = 4$
- b How many masks can Ramona make?
4 masks

- 6 **CHALLENGE** Write your own multiplication problem and include an equation.
Work will vary.

- 7 **CHALLENGE** Write your own division problem and include an equation.
Work will vary.

April: Day 10

Need:

-Put It on the Line, Game 2 Teacher Master

-Sticky notes

-More/Less die

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Number Line: 2-Playing Put It on the Line (p. 33)

1. Explain that today, the class will be split into 2 teams to play Put It on the Line.
2. Review the directions for Put It on the Line.
3. Display the Put It on the Line, Game 2 Teacher Master. Focus students' attention on the number line.
 - a. Ask students what numbers go on the dashes.
 - b. After filling it out, discuss some equivalent fractions.
4. Invite student volunteers from each team to reveal problems for the teams to solve. Allow enough time for all students to solve the problem.
5. Encourage students to share and explain their strategies as well as answers.
6. After adding up their scores, students can roll a more/less die to decide who wins.
7. After playing, have students reflect on how the game works. Ask if there is a strategy for getting more points or if it is all up to chance.

April: Day 11

Need:

-whiteboards & markers for each student

C. Grid: 3-Making Observations & Predictions (p. 11)

1. On their whiteboards, have students make at least four observations about the calendar markers with a partner.
2. Go around the room and have each pair share one observation. Challenge students to all share a different observation.
3. Add several observations to the chart, especially observations about equivalent fractions.
4. Have students draw their prediction for today's calendar marker.
5. After a few students have shared their predictions, reveal today's marker.
6. Have students discuss how their predictions were similar or different to today's marker.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

April: Day 12

Need:

-Marked Quick Facts worksheets
-Tracking sheets
-Quick Facts Teacher Master (class set)
-Rows & Columns Multiplication Game Teacher Master
-Spinner overlays

C. Grid: Update

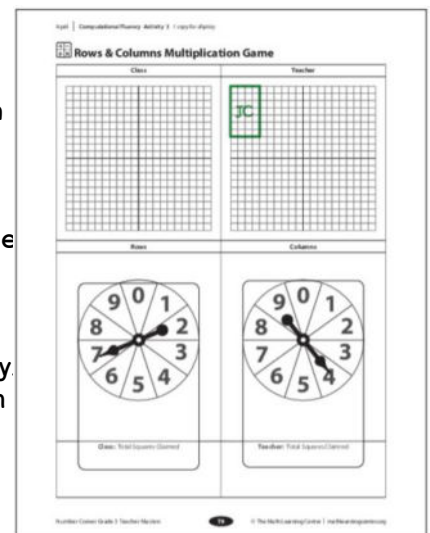
1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Comp. Fluency: 3-Rows & Columns Multiplication Game (p. 25)

1. Have students record the results from their last Quick Facts on their tracking sheet.
2. Pass out a new copy of the Quick Facts sheet and have students complete it with their next multiplier.
3. Introduce the game using the Rows & Columns Multiplication Game Teacher Master.
 - a. Review multiplication and division fact families.
 - b. Spin both spinners. The rows spinner shows the vertical dimension and the columns spinner shows the horizontal dimension of an array.
 - a. Outline a rectangular array with these dimensions anywhere on the Teacher grid. In order to "claim" the rectangular array, you must be able to record the fact family.
 - a. Record the equations on a separate sheet of paper or on the whiteboard. Students can challenge you if they think you haven't done the multiplication correctly. If they are correct and you didn't record the fact family correctly, you do not get to claim the rectangular array. If you prove that you have done it correctly, claim the array by writing your initials inside.
1. Then have the class take a turn.
 - a. Invite different students to spin the spinners. Have another student outline the array
 - b. Have another student list the fact family. If everything is correct, the class can claim their array.
1. Continue to take turns until you or the class cannot use the dimensions spun to make an array that will fit in the grid without overlapping another array.
 - a. Then find the sum of each team's products. The team with the greater sum wins.



April: Day 13

Need:

- Put It on the Line, Game 3 (half class set)
- More/Less die

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Number Line: 3-Playing Put It on the Line with a Partner (p. 35)

1. Today students will play Put It on the Line with a partner. Distribute copies of the Put It on the Line, Game 3 to students pairs. Make sure the questions are covered with sticky notes.
2. Display your copy of Put It on the Line, Game 3. Ask students what numbers would go on the dashes on the number line.
3. After discussing what numbers go on the number line, ask students to think of some equivalent fractions.
4. Review the directions for the game if necessary.
5. Have students get two different colored pencils and then play the game with their partner. Encourage them to share and explain their strategies as well as answers.
6. At the end of time, have students add up their scores. Remember to add the more/less die as an option for deciding who wins.

April: Day 14

Need:

- Marked student Quick Facts Worksheets
- Student Book pages 65-66

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Solving Problems: 1-Solving & Discussing Problems (p. 37)




1. Display Student Book page 65. Read over each problem (complete 1a and 2a together if needed).
2. Return students' most recent Quick Facts papers and have them identify which problems were most challenging. They will select three of these to use on number 3.

- a. On number 3, they should draw an array to represent the combination. Then, using the array to illustrate a strategy for calculating the product that works well for them.

1. Give students time to complete the student book pages.
1. In the last 5 minutes, discuss the equations students wrote for the story problems or by addressing any common points of confusion.

Multiplication & Division Problems 3 page 1 of 2

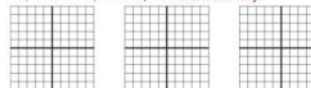
1 For each array, show how you can break it into smaller arrays to find the product. Then write a multiplication and division fact family for the array.

 <p>a</p> $\begin{array}{l} 7 \times 8 = 56 \\ 8 \times 7 = 56 \\ 56 \div 7 = 8 \\ 56 \div 8 = 7 \end{array}$	 <p>b</p> $\begin{array}{l} 9 \times 6 = 54 \\ 6 \times 9 = 54 \\ 54 \div 9 = 6 \\ 54 \div 6 = 9 \end{array}$	 <p>c</p> $\begin{array}{l} 7 \times 7 = 49 \\ 49 \div 7 = 7 \end{array}$
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2 Complete each equation by filling in the missing number.

$$\begin{array}{l} 21 = 3 \times 7 \\ 7 \times 56 = 8 \\ 7 \times 3 = 21 \\ 8 \times 7 = 56 \\ 21 = 3 \div 7 \\ 8 = 56 \div 7 \end{array}$$

3 Look over your last Quick Facts page and select three combinations that were challenging for you. Draw an array for each one, and show how you can divide the array into smaller arrays to find the product. **Work will vary.**



Multiplication & Division Problems 3 page 2 of 2

4 Marianna is getting barrettes to share with her sisters. She bought 4 packages, and each package has 8 barrettes.

- a Write an equation to represent this problem.
 $4 \times 8 = 32$
- b How many barrettes did Marianna buy in all?
32 barrettes

5 Marianna has 3 sisters. On Saturday they washed cars to earn some money. All 4 of the sisters worked on her own and washed exactly the same number of cars. Altogether, they washed 24 cars.

- a Write an equation to represent this problem.
 $24 \div 4 = 6$
- b How many cars did each sister wash?
6 cars

6 CHALLENGE Write your own multiplication problem and include an equation.

Work will vary.

7 CHALLENGE Write your own division problem and include an equation.

Work will vary.

April: Day 17

Need:

-More Than Fractions Student Book page

54

C. Grid: 4-Looking at Thirds (p. 12)

1. Update the calendar and observations chart.
2. Display the More Than Fractions student book page. Work through the first problem as a class.
3. Give students time to complete the rest of the page.
4. Have students make predictions about the remaining calendar markers.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

More About Fractions

- 1 Label each calendar marker below with at least one fraction name.

Calendar Marker	6	7	8	9	10
1st Fraction Name	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
2nd Fraction Name	$\frac{4}{12}$	$\frac{2}{6}$	$\frac{2}{60}$	$\frac{4}{12}$	$\frac{4}{12}$

- 2 List at least two ways in which the calendar markers above are alike.

Student explanations may vary.

- 3 LaTonya says that all of these markers show $\frac{1}{3}$ of something. Do you agree with her? Why or why not?

Agree; all fractions can be reduced to $\frac{1}{3}$.

- 4 Which is more, $\frac{1}{2}$ or $\frac{1}{3}$? How do you know?

$\frac{1}{2}$ is more than $\frac{1}{3}$; $\frac{1}{3}$ is the same as $\frac{2}{6}$ and $\frac{1}{2}$ is more than $\frac{2}{6}$.

- 5 Color in $\frac{1}{3}$ of the eggs in this carton.



Location of "eggs" may vary.

April: Day 18

Need:

-Rows & Columns Multiplication Game Student Book pg. 60

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Comp. Fluency: 3-Rows & Columns Multiplication Game (p. 25)

1. Have students record the results from their last Quick Facts on their tracking sheet.
2. Pass out a new copy of the Quick Facts sheet and have students complete it with their next multiplier.
3. Review the game using the Rows & Columns Multiplication Game Teacher Master. Students will play with a partner in their student books.
 - a. Spin both spinners. The rows spinner shows the vertical dimension and the columns spinner shows the horizontal dimension of an array.
 - b. Outline a rectangular array with these dimensions anywhere on the grid. In order to "claim" the rectangular array, you must be able to record the fact family.
 - c. Record the equations on a separate sheet of paper or on whiteboards. Students can challenge each other if they think their partner hasn't done the multiplication correctly. If they are correct and their partner didn't record the fact family correctly, they do not get to claim the rectangular array. If their partners proves that they have done it correctly, they can claim the array by writing their initials inside.
 - d. Students continue to take turns until someone cannot use the dimensions spun to make an array that will fit in the grid without overlapping another array.
 - e. Then they find the sum of each partner's products. The partner with the greater sum wins.
4. Give students time to play the game with a partner.

April: Day 19

Need:

- Marked Quick Facts worksheets
- Student Book pages 67-68

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: Update

1. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

Solving Problems: 1-Solving & Discussing Problems (p. 37)

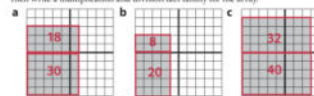
1. Display Student Book page 67. Read over each problem (complete 1a and 2a together if needed).
2. Return students' most recent Quick Facts papers and have them identify which problems were most challenging. They will select three of these to use on number 3.

- a. On number 3, they should draw an array to represent the combination. Then, using the array to illustrate a strategy for calculating the product that works well for them.

1. Give students time to complete the student book pages.
1. In the last 5 minutes, discuss the equations students wrote for the story problems or by addressing any common points of confusion.

Multiplication & Division Problems 4 page 1 of 2

1 For each array, show how you can break it into smaller arrays to find the product. Then write a multiplication and division fact family for the array.



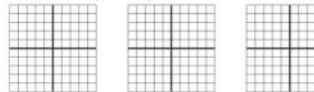
Arrays may vary.

$8 \times 6 = 48$	$7 \times 4 = 28$	$9 \times 8 = 72$
$6 \times 8 = 48$	$4 \times 7 = 28$	$8 \times 9 = 72$
$48 \div 8 = 6$	$28 \div 7 = 4$	$72 \div 9 = 8$
$48 \div 6 = 8$	$28 \div 4 = 7$	$72 \div 8 = 9$

2 Complete each equation by filling in the missing number.

$8 \times 4 = 32$	$64 \div 8 = 8$	$48 \div 8 = 6$	$24 \div 8 = 3$
$6 \times 3 = 18$	$36 \div 6 = 6$	$42 \div 6 = 7$	$54 \div 6 = 9$

3 Look over your last Quick Facts page and select three combinations that were challenging for you. Draw an array for each one, and show how you can divide the array into smaller arrays to find the product. **Work will vary.**



Multiplication & Division Problems 4 page 2 of 2

4 Rashawn and his dad are getting ready for a party. They bought 2 bags that each had 7 oranges in them and 5 bags that each had 7 apples in them.

- a Write an equation to represent this problem.
 $(2 \times 7) + (5 \times 7) = 49$
- b How many pieces of fruit did they buy in all?
49 pieces of fruit

5 Rashawn is making goody bags for the friends who are coming to his party. He has 63 marbles and he wants to put the same number of marbles in each of the 9 bags. So far, he has put 4 marbles in each bag.

- a Write an equation to represent this problem.
Equations may vary.
 $63 \div 9 = 7$ marbles per bag total; $7 - 4 = 3$ more per bag.
- b How many more marbles will he put in each bag?
He will put 3 more marbles in each bag.

6 CHALLENGE Write your own multiplication story problem and include an equation.

Work will vary.

7 CHALLENGE Write your own division story problem and include an equation.

Work will vary.

April: Day 20

Need:

- Time Fractions Story Problems Student Book page 55

C. Grid: Update

1. Post one or more calendar markers so that the Calendar Grid is current.
2. Update the Calendar Grid Observation Chart.

C. Collector: 4-Solving Fractional Time Story Problems (p. 18)

1. Give students time to review the collection. Invite students to add equivalent fractions to the fraction column. Ask them to explain how they found the total amount of minutes and hours.
2. Spin to find out how many fractions of an hour to add to the collection. Shade in the amount. Update the record sheet.

1. Display the Time Fractions Story Problems page.
2. Work through problems 1 and 2 as a class. Have several students share their strategies.
1. Have students choose 1 or 2 other problems to solve in their student books.
2. If students finish early, they can work of the other problems.
3. At the end of the session, have students share their answers and strategies with a partner.

Time Fractions Story Problems

Show your work to solve the following. **Work will vary.**

- 1 At 2:05 Tom said that school is over in three-quarters of an hour. What time is school over?
2:50
- 2 At 1:30 Deb's friend called and said, "Let's meet at the mall in one and one-third hours." What time are they meeting?
2:50
- 3 Bob said the movie starts in half an hour. If it is 2:15, what time does the movie start?
2:45
- 4 At 6:45 Jamie's dad said she had to go to bed in one and three-quarters of an hour. What time does Jamie have to go to bed?
8:30
- 5 At 2:15 Cal's mom said that he could play video games for one and a half hours. What time does Cal have to stop playing video games?
3:45
- 6 At 7:50 Don said his favorite show starts in two-thirds of an hour. What time does the show start?
8:30
- 7 Gym class is over in two-fourths of an hour. If it is 1:30 now, what time will gym class be over?
2:00
- 8 The recital lasted for one and a quarter hours. It ended at 3:30. What time did it start?
2:15

April Daily Planner

Day	Date	Calendar Grid	Calendar Collector	Computational Fluency	Number Line	Solving Problems
1		Activity 1 Introducing the Calendar Grid Markers (p. 7)				
2		Update	Activity 1 Collecting Half-Hours (p. 14)			
3		Update	Update	Activity 1 Introducing Quick Facts (p. 21)		
4		Update	Update		Activity 1 Introducing Put It on the Line (p. 30)	
5		Update	Update			Activity 1 Solving & Discussing Problems (p. 37)
6		Activity 2 Representing Fractions on a Number Line (p. 9)	Update			
7		Update	Update	Activity 2 Multiplication & Division Fact Families (p. 23)		
8		Update	Activity 2 Collecting Quarter-Hours (p. 16)			
9		Update	Update			Activity 1 Solving & Discussing Problems (p. 37)
10		Update	Update		Activity 2 Playing Put It on the Line as a Class (p. 33)	
11		Activity 3 Making Observations & Predictions (p. 11)	Update			
12		Update	Update	Activity 3 Rows & Columns Multiplication Game (p. 25)		
13		Update	Update		Activity 3 Playing Put It on the Line with a Partner (p. 35)	
14		Update	Update			Activity 1 Solving & Discussing Problems (p. 37)
15		Update	Activity 3 Collecting Thirds of an Hour (p. 17)			
16		Update	Update	Activity 4 The Associative Property (p. 27)		
17		Activity 4 Looking at Thirds (p. 12)	Update			
18		Update	Update	Activity 3 Rows & Columns Multiplication Game (p. 25)		
19		Update	Update			Activity 1 Solving & Discussing Problems (p. 37)
20		Update	Activity 4 Solving Fractional Time Story Problems (p. 18)			

April Grid Answer Key

About the Pattern:

- Features twelfths and sixths shown as parts of a rectangular array, pizza, clock face, egg carton, and ruler
- For 5 days, one-sixth is shown on each model, then two-sixths...
- Every 5 days, the fraction shown on the markers increases by one-sixth, and students are asked to figure out what is similar about each set of 5 markers
- For example, they consider what a rectangular array with 2 red tiles out of 12 has in common with a sixth of a pizza
- Students develop a deeper understanding of equivalent fractions and intuitive ideas about common denominators

Date	Description of Part and Whole	Fraction
1	2 of the 12 blocks are red	$\frac{2}{12}$ or $\frac{1}{6}$
2	1 slice of a 6-piece pizza	$\frac{1}{6}$
3	10 minutes or 2 of 12 sections	$\frac{2}{12}$ or $\frac{1}{6}$
4	2 of 12 eggs	$\frac{1}{6}$
5	2 of 12 inches are blue	$\frac{2}{12}$ or $\frac{1}{6}$
6	4 of the 12 blocks are red	$\frac{4}{12}$ or $\frac{1}{3}$
7	2 slices of a 6-piece pizza	$\frac{2}{6}$ or $\frac{1}{3}$
8	20 minutes or 4 of 12 sections	$\frac{4}{12}$ or $\frac{1}{3}$
9	4 of 12 eggs	$\frac{4}{12}$ or $\frac{1}{3}$

10	4 of 12 inches are blue	$\frac{4}{12}$ or $\frac{1}{3}$
11	6 of the 12 blocks are red	$\frac{6}{12}$ or $\frac{1}{2}$
12	3 slices of a 6-piece pizza	$\frac{3}{6}$ or $\frac{1}{2}$
13	30 minutes or 6 of 12 sections	$\frac{6}{12}$ or $\frac{1}{2}$
14	6 of 12 eggs	$\frac{6}{12}$ or $\frac{1}{2}$
15	6 of 12 inches are blue	$\frac{6}{12}$ or $\frac{1}{2}$
16	8 of the 12 blocks are red	$\frac{8}{12}$ or $\frac{2}{3}$
17	4 slices of a 6-piece pizza	$\frac{4}{6}$ or $\frac{2}{3}$
18	40 minutes or 8 of 12 sections	$\frac{8}{12}$ or $\frac{2}{3}$
19	8 of 12 eggs	$\frac{8}{12}$ or $\frac{2}{3}$
20	8 of 12 inches are blue	$\frac{8}{12}$ or $\frac{2}{3}$
21	10 of the 12 blocks are red	$\frac{10}{12}$ or $\frac{5}{6}$
22	5 slices of a 6-piece pizza	$\frac{5}{6}$
23	50 minutes or 10 of 12 sections	$\frac{10}{12}$ or $\frac{5}{6}$
24	10 of 12 eggs	$\frac{10}{12}$ or $\frac{5}{6}$
25	10 of 12 inches are blue	$\frac{10}{12}$ or $\frac{5}{6}$
26	12 of the 12 blocks are red	$\frac{12}{12}$ or 1
27	6 slices of a 6-piece pizza	$\frac{6}{6}$ or 1
28	60 minutes or 12 of 12 sections	$\frac{12}{12}$ or 1
29	12 of 12 eggs	$\frac{12}{12}$ or 1
30	12 of 12 inches are blue	$\frac{12}{12}$ or 1