

# Eureka Math

## 3rd Grade Module 7 Lesson 34

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**Screen A**

ReadyGEN™ in Action

3<sup>rd</sup> Grade  
Unit 3, Module A  
Lesson 1

“pop-out”

**Screen B**

Gr3(2) U3MAL1 Sample Lesson.pptx

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ReadyGEN™ in Action

3<sup>rd</sup> Grade  
Unit 3, Module A  
Lesson 1

# Icons



Read, Draw, Write



Learning Target



Personal White Board



Problem Set



Manipulatives Needed



Fluency



Think Pair Share



Whole Class



Individual



Partner



Small Group



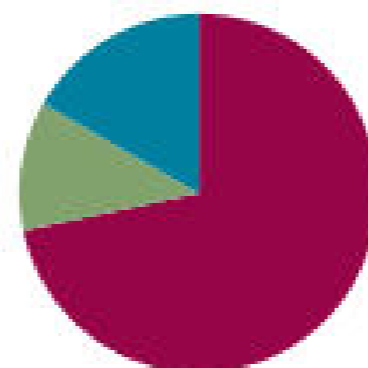
Small Group Time

## Lesson 34

**Objective:** Create resource booklets to support fluency with Grade 3 skills.

### Suggested Lesson Structure

■ Application Problem	(7 minutes)
■ Fluency Practice	(43 minutes)
■ Student Debrief	(10 minutes)
<b>Total Time</b>	<b>(60 minutes)</b>



#### NOTES ON RESOURCES INCLUDED IN THIS LESSON:

This lesson includes suggestions and resources for assembling a Summer Practice packet in addition to the



I can create resource booklets to support fluency with 3rd grade skills



# Application Problem

(7 mins.)

There are 9 bicycles and some tricycles at the repair shop.  
There are 42 total wheels on all the bicycles and tricycles.  
How many tricycles are in the shop?



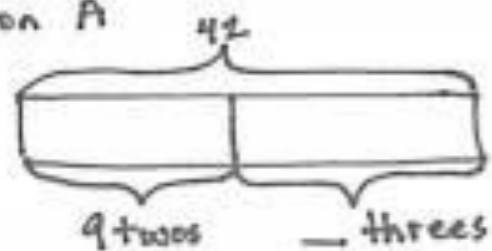


# Application Problem

(7 mins.)

There are 9 bicycles and some tricycles at the repair shop. There are 42 total wheels on all the bicycles and tricycles. How many tricycles are in the shop?

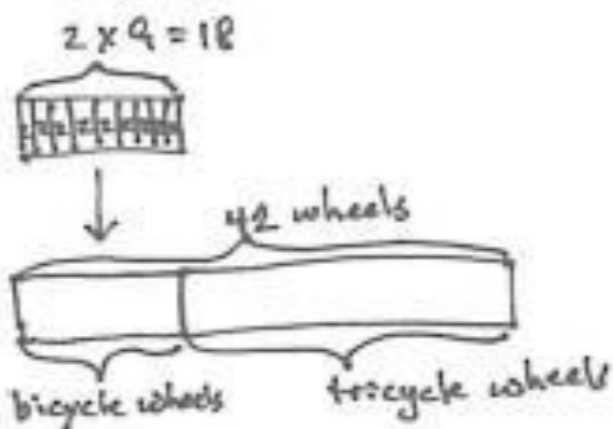
Solution A



$$\begin{aligned}2 \times 9 &= 18 \\ 42 - 18 &= 24 \\ 24 \div 3 &= 8\end{aligned}$$

There are 8 tricycles in the shop.

Solution B

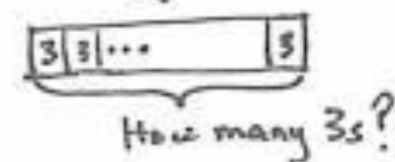
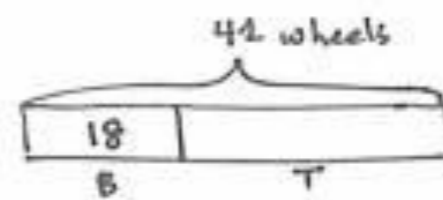


$$\begin{aligned}2 \times 9 &= 18 \\ 42 - 18 &= 24 \\ 3 \times [8] &= 24\end{aligned}$$

There are 8 tricycles.

Solution C

$$2 \times 9 = 18$$



$$\begin{aligned}42 - 18 &= 24 \\ 24 \div 3 &= 8\end{aligned}$$

There are 8 tricycles in the shop.





# Fluency Practice

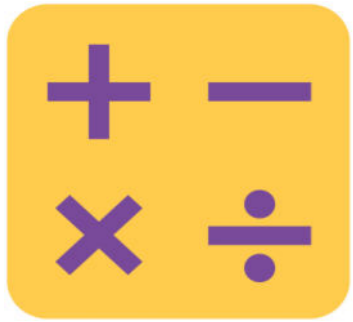
(43 minutes)

Think about all the fluency activities we did this year. Which were your favorites?

Which ones helped you improve your fluency with multiplication and division facts? Share with a partner.







# Fluency Practice

## SPRINT (10 Mins.)

Let's do one last Grade 3 Sprint to celebrate just how far we have come. Then, we will make Summer Practice booklets of our favorite games so we can keep playing at home in the weeks to come.

A STORY OF UNITS Lesson 34 Sprint 3•7

**A** Number Correct: \_\_\_\_\_

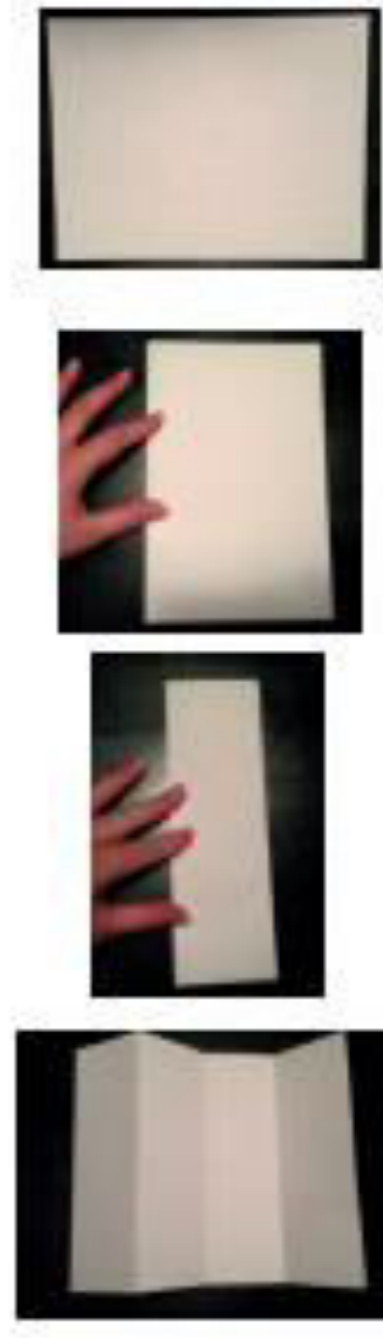
Multiply and Divide

1.	$3 \times 2 =$	
2.	$6 + 2 =$	
3.	$5 \times 3 =$	
4.	$15 + 5 =$	
5.	$4 \times 2 =$	
6.	$8 + 4 =$	
7.	$3 \times 3 =$	
8.	$9 + 3 =$	
9.	$4 \times 3 =$	
10.	$12 + 4 =$	
11.	$5 \times 5 =$	
12.	$25 + 5 =$	
13.	$6 \times 2 =$	
14.	$21 + 7 =$	
15.	$7 \times 4 =$	
16.	$16 + 8 =$	
17.	$18 + 3 =$	
18.	$18 + 9 =$	
19.	$8 \times 3 =$	
20.	$36 + 9 =$	
21.	$14 + 7 =$	
22.	$6 \times 4 =$	
23.	$2 \times 7 =$	
24.	$3 \times 8 =$	
25.	$4 \times 9 =$	
26.	$5 \times 7 =$	
27.	$36 + 6 =$	
28.	$42 + 7 =$	
29.	$64 + 8 =$	
30.	$45 + 9 =$	
31.	$2 \times 8 =$	
32.	$3 \times 9 =$	
33.	$32 + 4 =$	
34.	$45 + 5 =$	
35.	$6 \times 7 =$	
36.	$7 \times 7 =$	
37.	$56 + 8 =$	
38.	$63 + 9 =$	
39.	$6 \times 6 =$	
40.	$8 \times 8 =$	
41.	$81 + 9 =$	
42.	$49 + 7 =$	
43.	$54 + 6 =$	
44.	$56 + 7 =$	

# Summer Practice Book Assembly

Materials: (S) 11" × 17" paper (light-colored construction paper or tagboard preferred), scissors, (optional: game directions printouts from Lesson 33 for students to cut out and glue into booklets)

Let's make a booklet of practice materials that you can use over the summer. Start with a blank piece of paper. Lay it on your desk so that the long sides of the rectangle are at the top and the bottom.



# Summer Practice Book Assembly

Fold the left edge of the paper to meet the right edge. The short sides should be together. Make a tight crease when you fold. The tighter the creases, the better your book will turn out.

Keep the paper folded. Again, fold the left edge of the paper to meet the right edge. This time, the long sides should be together. Make a tight crease. You should have a long, skinny rectangle now.



Before we unfold, think about what fraction our paper is folded into. Say the fraction at my signal. (Signal.)

# Summer Practice Book Assembly

Now what fraction is the paper folded into?

Unfold the paper completely, and lay it out flat.

Fold the paper again the same way we first folded it. Make the left edge meet the right edge.

Make sure the open side is on the right. Trace the middle fold line halfway across, starting from the left. Do not go past the fold that shows halfway.

Now, cut on the line that you just drew. Do not cut past the fold that shows halfway.



# Summer Practice Book Assembly

Please put your scissors away.

Open up the paper again. You should have cut a slit in the middle of the paper.

Fold the top edge to meet the bottom edge so that you have a long rectangle and the slit you cut is at the top of the folded rectangle.



Push the right side of the rectangle toward the left side. Keep going until the pages push together and fall to either side.



**Fold the cover over the rest of the pages. Your pages will not line up perfectly, and it is important that you do not trim them with scissors, or your book will fall apart. On the cover of the book, write Summer Practice and your name underneath.**



Pull out the sheet where you recorded your favorite games from yesterday. Work with a partner to write the names of your favorite games and directions for those games in your booklets so that you will remember them later.

**(Alternatively, print the directions for the games from Lesson 33 for students to cut out their favorites and glue into the booklets.)**





# Mixed Review Games

Materials: (S) Fluency game materials (listed with each activity and included at the end of the lesson), Problem Set

- Play with a partner
- Take turns being teacher/student
- Record your games on the problem set

<p><b>Multiplication</b></p> <p>Materials: (S) Personal white board</p> <p>T: (Draw an array with 3 rows of 2.) Say the repeated addition sentence.</p> <p>S: <math>2 + 2 + 2 = 6</math>.</p> <p>T: (Write <math>3 \times \underline{\quad} = \underline{\quad}</math>.) On your personal white board, complete the multiplication sentence.</p> <p>S: (Write <math>3 \times 2 = 6</math>.)</p> <p>Repeat using the following ideas: 4 rows of 10, 3 rows of 4, 7 rows of 3, and 8 rows of 2. Or you can think of your own.</p>	<p><b>Equal Groups</b></p> <p>Materials: (S) Personal white board</p> <p>T: (Draw a picture with 2 groups of 4 circled.) Say the total as a repeated addition sentence.</p> <p>S: <math>4 + 4 = 8</math>.</p> <p>T: Write a division sentence that means the number of groups is unknown.</p> <p>S: (Write <math>8 \div 4 = 2</math>.)</p> <p>T: Below that division sentence, write a division sentence that means the number in each group is unknown.</p> <p>S: (Write <math>8 \div 2 = 4</math>.)</p> <p>Repeat using the following ideas: 5 groups of 3, 3 groups of 4, and 6 groups of 2. Or you can think of your own.</p>
<p><b>Commutative Multiplying</b></p> <p>Materials: (S) Personal white board</p> <p>T: (Draw an array with 3 rows of 2 dots.) How many rows of 2 do you see?</p> <p>S: 3 rows of 2.</p> <p>T: Write four different multiplication sentences for the picture.</p> <p>S: (Write <math>3 \times 2 = 6</math>, <math>2 \times 3 = 6</math>, <math>6 = 3 \times 2</math>, and <math>6 = 2 \times 3</math>.)</p> <p>Repeat using the following ideas: 3 rows of 5 and 4 rows of 3. Or you can think of your own.</p> <p>T: (Write <math>4 \times 2 = 2 \times \underline{\quad}</math>.) On your personal white board, fill in the blank.</p> <p>S: (Write <math>4 \times 2 = 2 \times 4</math>.)</p> <p>Repeat using the following ideas: <math>9 \times 5 = 5 \times \underline{\quad}</math> and <math>3 \times 6 = 6 \times \underline{\quad}</math>. Or you can think of your own.</p>	<p><b>Tape Diagrams</b></p> <p>Materials: (S) Personal white board</p> <p>T: (Draw a tape diagram with 5 equal units and 2 stars in the first unit.) What is the value of each unit?</p> <p>S: 2 stars.</p> <p>T: How many units are there?</p> <p>S: 5 units.</p> <p>T: Write a multiplication sentence for this tape diagram.</p> <p>S: (Write <math>5 \times 2 = 10</math>.)</p> <p>Repeat using the following ideas: <math>4 \times 3 = 12</math>, <math>8 \div 4 = 2</math>, and <math>15 \div 3 = 5</math>. Or you can think of your own.</p>

## Tens

Materials: (S) Place value cards, personal white board

Note: Place value cards can be made with index cards for personal practice.

T: (Write 7 tens = \_\_\_\_.) Say the number.

S: 70.

Repeat using the following ideas: 10 tens, 12 tens, 20 tens, 28 tens, 30 tens, and 37 tens. Or you can think of your own.



Place value cards

## Tens and Hundreds

Materials: (S) Personal white board

T: (Write  $9 + \underline{\quad} = 10$ .) Say the missing number.

S: 1.

T: (Write  $90 + \underline{\quad} = 100$ .) Say the missing number.

S: 10.

T: (Write  $91 + \underline{\quad} = 100$ .) Say the missing number.

S: 9.

T: (Write  $291 + \underline{\quad} = 300$ .) Say the missing number.

S: 9.

Repeat using the following ideas:

$1 + \underline{\quad} = 10$ ,  $10 + \underline{\quad} = 100$ ,  $11 + \underline{\quad} = 100$ ,  
 $211 + \underline{\quad} = 300$ ,  $8 + \underline{\quad} = 10$ ,  $80 + \underline{\quad} = 100$ ,  
 $85 + \underline{\quad} = 100$ , and  $385 + \underline{\quad} = 400$ .

Or you can think of your own.

## Make Twenty-Four Game

Materials: (S) Set of 6 cards per pair

Note: Students play in pairs. Each pair has a set of 6 cards, each with a number (2, 3, 4, 6, 8, and 12).

T: (Write  $\underline{\quad} \times \underline{\quad} = 24$ .) Spread the cards out in front of you.

T: Put your hands behind your back. I'll put a number in the first blank. When you know the number that belongs in the second blank, touch the card that shows the number. The first one of us to touch the card keeps it. Whoever has the most cards at the end wins. (Write 12 in the first blank.)

S: (Touch the 2 card. The first to touch it keeps the card.)

Repeat. This time, however, you might make 36 with the same cards plus 9 and 18.

## Write in the Parentheses

Materials: (S) Personal white board

T: (Write  $10 - 5 + 3 = 8$ .) On your personal white board, copy the equation. Then, insert parentheses to make the statement true.

S: (Write  $(10 - 5) + 3 = 8$ .)

Repeat using the following ideas:

$10 - 5 + 3 = 2$ ,  $10 = 20 - 7 + 3$ ,  $16 = 20 - 7 + 3$ ,  
 $8 + 2 \times 4 = 16$ ,  $8 + 2 \times 4 = 40$ ,  $12 = 12 \div 2 \times 2$ ,  $3 = 12 \div 2 \times 2$ ,  $10 = 35 - 5 \times 5$ , and  $20 - 10 \div 5 = 2$ .

Or you can think of your own.

### Round Three- and Four-Digit Numbers

Materials: (S) Personal white board

T: (Write  $87 \approx \underline{\quad}$ .) What is 87 rounded to the nearest ten?

S: 90.

Repeat using the following ideas: 97, 43, 643, 35, and 835. Or you can think of your own.

T: (Write  $253 \approx \underline{\quad}$ .) What is 253 rounded to the nearest hundred?

S: 300.

Repeat using the following ideas: 1,253, 735, 1,735, 850, 1,850, 952, 1,371, and 1,450. Or you can think of your own.

### Partition Shapes

Materials: (S) Personal white board

T: Draw a square.

S: (Draw a square.)

T: (Write  $\frac{1}{2}$ .) Estimate to equally partition the square into halves.

S: (Partition.)

Repeat using the following ideas: line  $\frac{1}{5}$ , circle  $\frac{1}{4}$ , circle  $\frac{1}{8}$ , bar  $\frac{1}{10}$ , and bar  $\frac{1}{6}$ .

Or you can think of your own.

### Write the Unit Fraction

Materials: (S) Personal white board

T: (Draw a shape with  $\frac{1}{2}$  shaded.) Write the unit fraction.

S: (Write  $\frac{1}{2}$ .)

Repeat using the following ideas:  $\frac{1}{4}$ ,  $\frac{1}{8}$ ,  $\frac{1}{6}$ ,  $\frac{1}{10}$ , and  $\frac{1}{5}$ .

Or you can think of your own.

### Greater or Less Than 1?

T: (Write  $\frac{1}{2}$ .) Greater or less than 1?

S: Less!

Repeat using the following ideas:  $\frac{3}{2}$ ,  $\frac{5}{4}$ ,  $\frac{3}{4}$ ,  $\frac{3}{7}$ ,  $\frac{5}{3}$ , and  $\frac{5}{2}$ .

Or you can think of your own.

### Draw Fractions from Part to Whole

Materials: (S) Personal white board

T: Draw 1 unit on your personal white board.

S: (Draw 1 unit.)

T: Label the unit  $\frac{1}{3}$ . Now, draw the whole that goes with your unit of  $\frac{1}{3}$ .

Repeat using the following ideas:  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{4}$ , and  $\frac{1}{2}$ .

Or you can think of your own.

### Draw Number Bonds of One

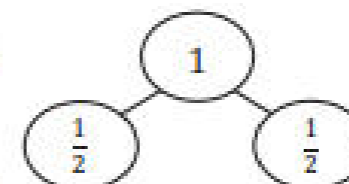
Materials: (S) Personal white board

T: Draw a number bond to partition one into halves.

S: (Draw.)

T: How many copies of 1 half did you draw to make one?

S: 2 copies.



Repeat using the following ideas: thirds, fourths, fifths, sixths, sevenths, etc. Or you can think of your own.



# Summer Math Calendar

Name \_\_\_\_\_ Date \_\_\_\_\_

Complete a math activity each day. To track your progress, color the box after you finish.

### Summer Math Review: Weeks 1–5

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Do jumping jacks as you count by twos from 2 to 20 and back.	Play a game from your Summer Practice booklet.	Use your tangram pieces to make a picture of your summer break.	Time how long it takes you to do a specific chore, like making the bed. See if you can do it faster the next day.	Complete a Sprint.
Week 2	Do squats as you count by threes from 3 to 30 and back.	Play a game from your Summer Practice booklet.	Collect data about your family's or friends' favorite type of music. Show it on a bar graph. What did you discover from your graph?	Read a recipe. What fractions does the recipe use?	Complete a Multiply by Pattern Sheet.
Week 3	Hop on one foot as you count by fours from 4 to 40 and back.	Create a multiplication and/or division math game. Then, play the game with a partner.	Measure the widths of different leaves from the same tree to the nearest quarter inch. Then, draw a line plot of your data. Do you notice a pattern?	Read the weight in grams of different food items in your kitchen. Round the weights to the nearest 10 or 100 grams.	Complete a Sprint.
Week 4	Bounce a ball as you count by 5 minutes to 1 hour and then to the half hour and quarter hours.	Find, draw, and/or create different objects to show one-fourth.	Go on a shape scavenger hunt. Find as many quadrilaterals in your neighborhood or house as you can.	Find the sum and difference of 453 mL and 379 mL.	Complete a Multiply by Pattern Sheet.
Week 5	Do arm swings as you count by sixes from 6 to 60 and back.	Draw and label a floor plan of your house.	Measure the perimeter of the room where you sleep in inches. Then, calculate the area.	Use a stopwatch to measure how fast you can run 50 meters. Do it 3 times. What was your fastest time?	Complete a Sprint.

# Debrief

Guide students in a conversation to process the lesson. Any combination of the questions below may be used to lead the discussion.

- What was your favorite math topic in third grade? Why?
- What models or manipulatives helped you with new concepts?
- What was your greatest accomplishment in math this year?
- What are some ways you can keep your math skills sharp during the summer?
- What are you most excited to learn next year as a fourth grader?