Materials List

Materials:

(S) index card (1 per pair, see description page 265), sentence strip (1 per pair), chart paper (1 per group), markers, glue, math journal

Eureka Math

3rd Grade
Module 5
Lesson 23

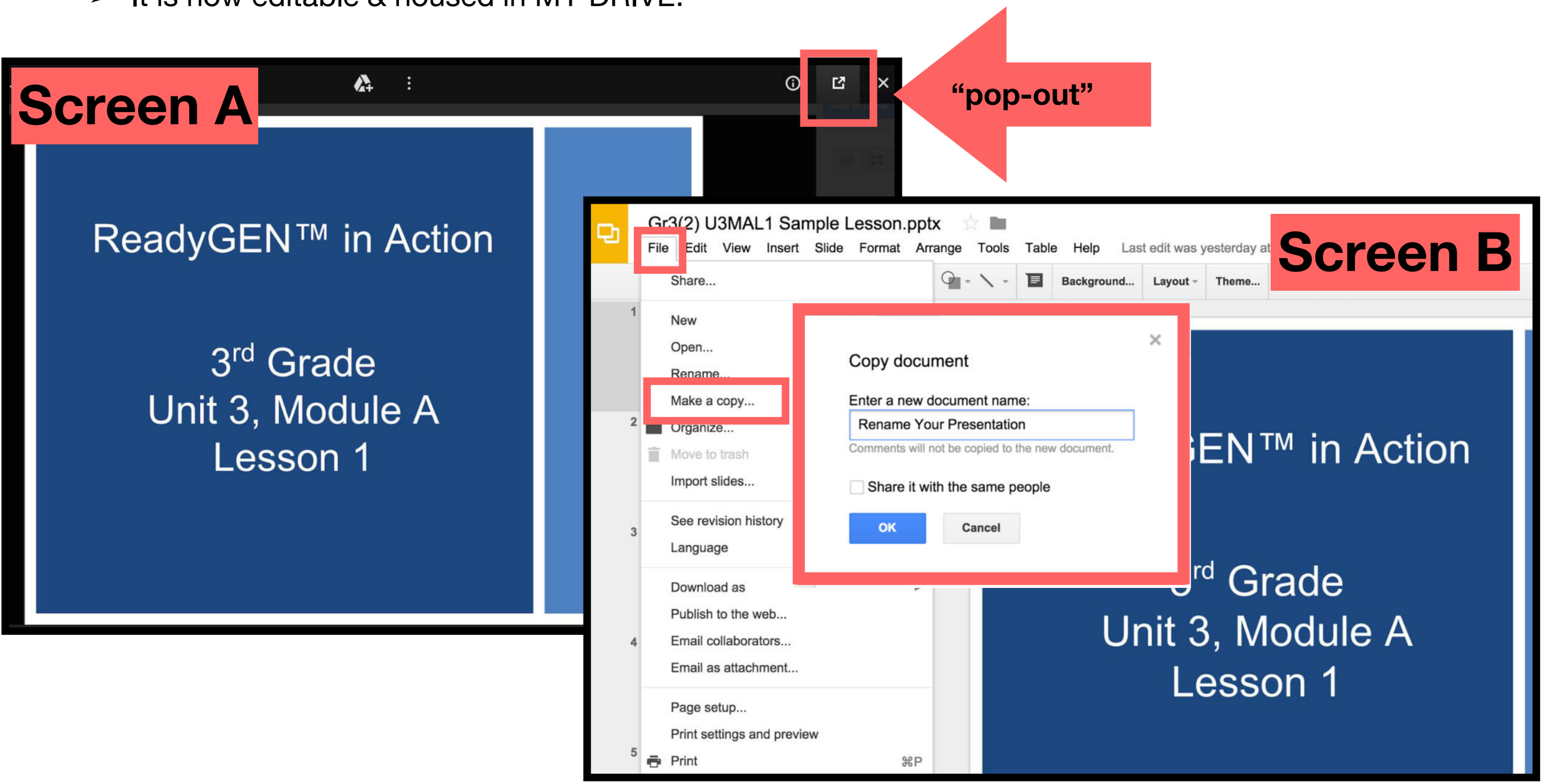
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- ➢ When the Google Slides presentation is opened, it will look like Screen A.
- ➢ Click on the “pop-out” button in the upper right hand corner to change the view.
- ➢ The view now looks like Screen B.
- ➢ Within Google Slides (not Chrome), choose FILE.
- ➢ Choose MAKE A COPY and rename your presentation.
- ➢ Google Slides will open your renamed presentation.
- ➢ It is now editable & housed in MY DRIVE.



Icons

Read, Draw, Write

Learning Target

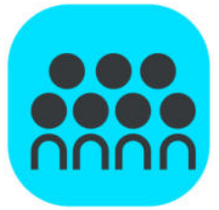
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

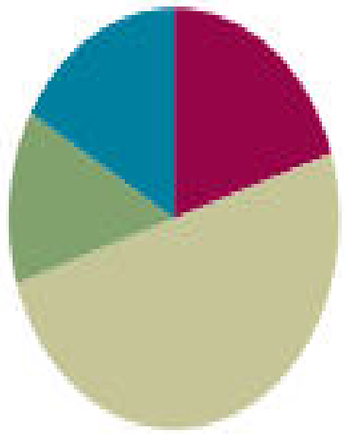
Small Group Time

Lesson 23

Objective: Generate simple equivalent fractions by using visual fraction models and the number line.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(8 minutes)
Concept Development	(30 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



Objective: Generate simple equivalent fractions by using visual fraction models and the number line.

Fluency Practice

Sprint (8 minutes)

Add by six

Add by Six

1.	0 + 6 =	
2.	1 + 6 =	
3.	2 + 6 =	
4.	3 + 6 =	
5.	4 + 6 =	
6.	6 + 4 =	
7.	6 + 3 =	
8.	6 + 2 =	
9.	6 + 1 =	
10.	6 + 0 =	
11.	15 + 6 =	
12.	25 + 6 =	
13.	35 + 6 =	

23.	7 + 6 =	
24.	17 + 6 =	
25.	27 + 6 =	
26.	37 + 6 =	
27.	47 + 6 =	
28.	77 + 6 =	
29.	8 + 6 =	
30.	18 + 6 =	
31.	28 + 6 =	
32.	38 + 6 =	
33.	48 + 6 =	
34.	78 + 6 =	
35.	9 + 6 =	

Fluency Practice

Find the Equivalent Fraction (4 minutes)

- Partition the first square into two parts and label the fraction.
- Partition the second square into fourths and label the fraction.
- Complete the sentence one-half equals _____ fourths.

Application Problem

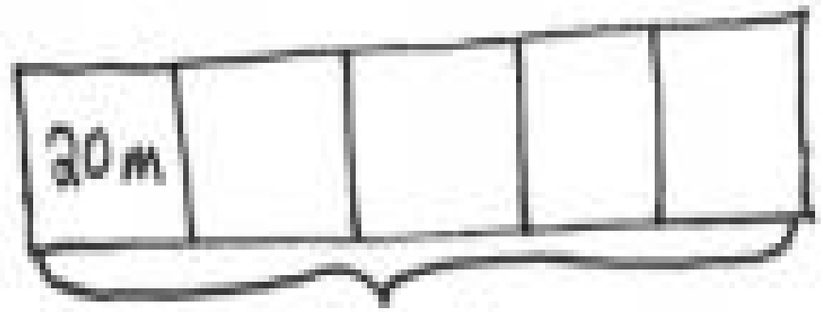
Shannon stood at the end of a 100-meter long soccer field and kicked the ball to her teammate. She kicked it 20 meters. The commentator said she kicked it a quarter of the way down the field. Is that true? If not, what fraction should the commentator have said? Prove your answer by using a number line.

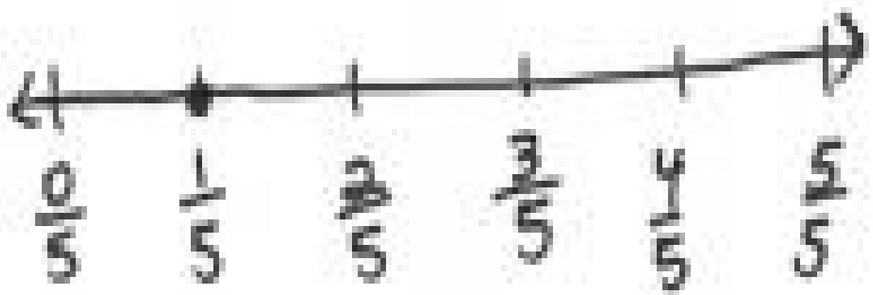
Note: This problem reviews partitioning a whole into equal parts from Topic A.

Application Problem

20, 40, 60, 80, 100

5 units of 20





She did not kick it a quarter ($\frac{1}{4}$) of the way. She kicked it $\frac{1}{5}$. The commentator should've said $\frac{1}{5}$ of the way.

Concept Development

Students work in pairs. Each pair receives one sentence strip and an index card. The index card designates endpoints on a number line and a unit with which to partition.

Example:

Group A
Interval: 3–5
Unit: thirds

Group A
Interval: 3–5
Unit: sixths

Concept Development

- With your partner, use your sentence strip to make a number line with your given interval.
- Then, estimate to partition into your given unit by folding your sentence strip.
- Label the endpoints and fractions.
- Rename the wholes.

Concept Development

Now find your other letter group members and glue your number lines on your chart paper in a column so that the ends match up on your chart paper. Compare number lines to find equivalent fractions.

Group A: Interval 3–5, thirds and sixths

Group B: Interval 1–3, sixths and twelfths

Group C: Interval 3–5, halves and fourths

Group D: Interval 1–3, fourths and eighths

Group E: Interval 4–6, sixths and twelfths

Group F: Interval 6–8, halves and fourths

Concept Development

Museum walk:

As a letter group, you will visit the other groups' chart papers.

One person in each group will be the recorder. (You can switch recorders each time you visit a new chart paper.)

Your job will be to find and list all of the equivalent fractions you see at each chart paper

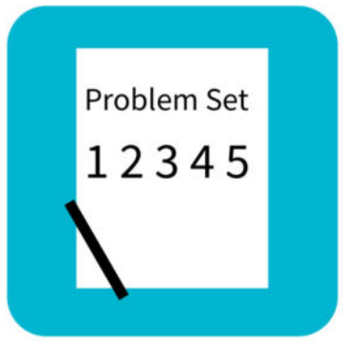
Concept Development

Museum walk:

Go back to your own chart paper with your letter group.

Take your math journals, and check your friends' work.

Did they name the same equivalent fractions you found?



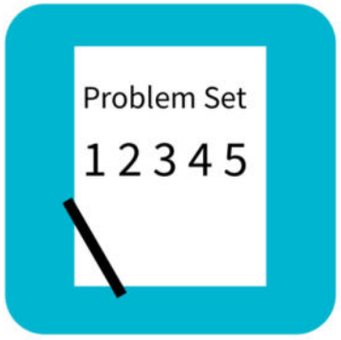
Problem Set

1. On the number line above, use a red colored pencil to divide each whole into fourths, and label each fraction above the line. Use a fraction strip to help you estimate, if necessary.

2. On the number line above, use a blue colored pencil to divide each whole into eighths, and label each fraction below the line. Refold your fraction strip from Problem 1 to help you estimate.

3. List the fractions that name the same place on the number line.

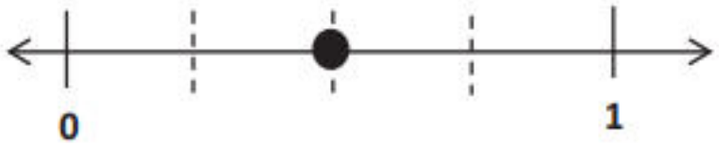
4. Using your number line to help, what red fraction and what blue fraction would be equal to $\frac{7}{2}$? Draw the part of the number line below that would include these fractions, and label it.



Problem Set

5. Write two different fractions for the dot on the number line. You may use halves, thirds, fourths, fifths, sixths, or eighths. Use fraction strips to help you, if necessary.

_____ = _____



_____ = _____

_____ = _____

_____ = _____

6. Cameron and Terrance plan to run in the city race on Saturday. Cameron has decided that he will divide his race into 3 equal parts and will stop to rest after running 2 of them. Terrance divides his race into 6 equal parts and will stop and rest after running 2 of them. Will the boys rest at the same spot in the race? Why or why not? Draw a number line to explain your answer.

Debrief

- Could we sequentially connect the number lines you made in today's lesson even though they are partitioned into different units? What would happen then?
- Compare all of the answers for Problem 5. (Use this comparison to advance the idea that the world of fractions is endless. There are many different fractions that label a single point.)

Exit Ticket (3 minutes)

Henry and Maddie were in a pie-eating contest. The pies were cut either into thirds or sixths. Henry picked up a pie cut into sixths and ate $\frac{4}{6}$ of it in 1 minute. Maddie picked up a pie cut into thirds. What fraction of her pie does Maddie have to eat in 1 minute to tie with Henry? Draw a number line, and use words to explain your answer.