Eureka Math

2nd Grade
Module 8
Lesson 13

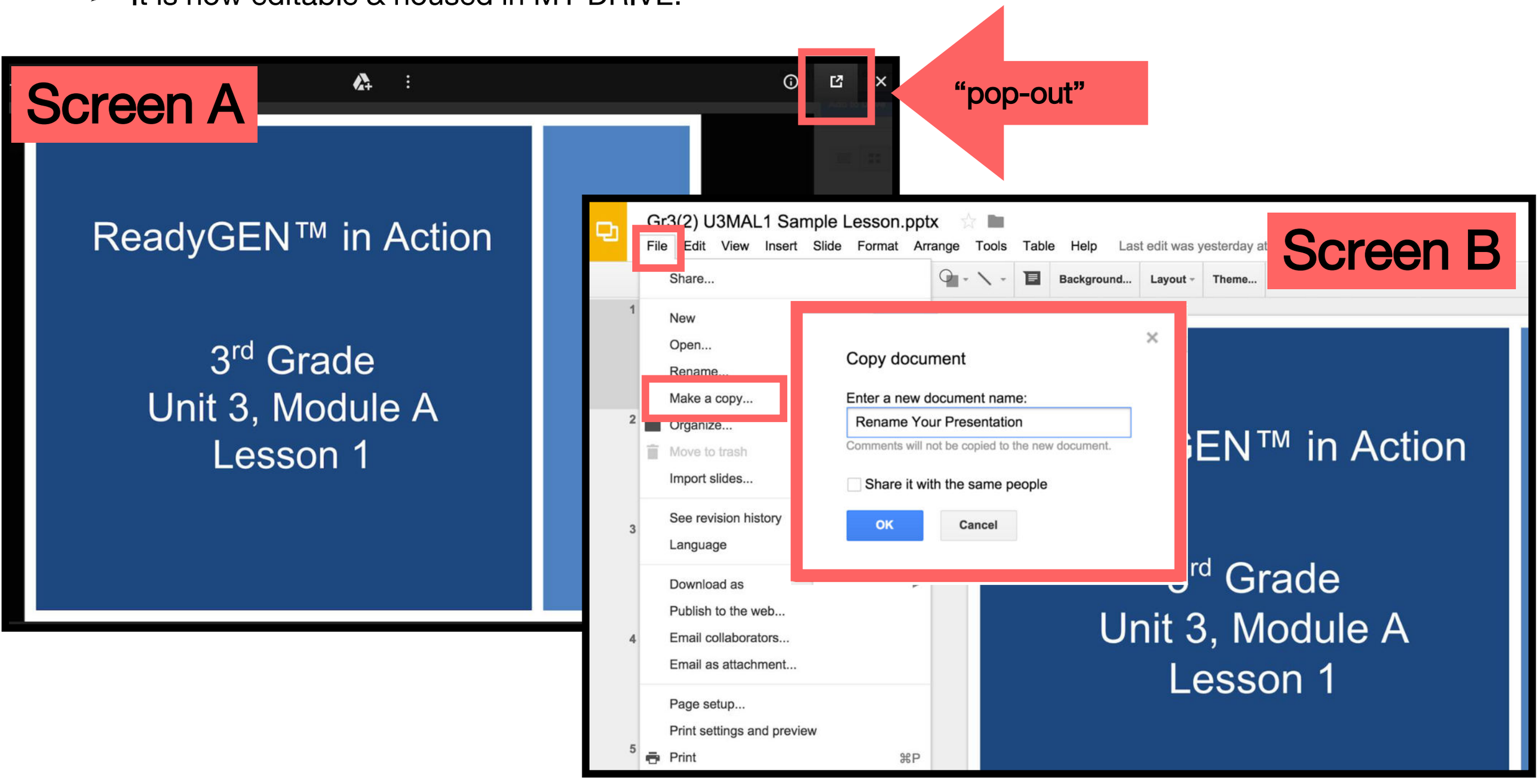
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

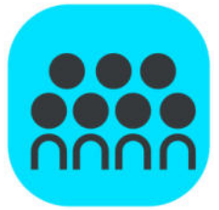
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

Small Group Time

Materials Needed:

Materials:
(S) White Board, place value chart

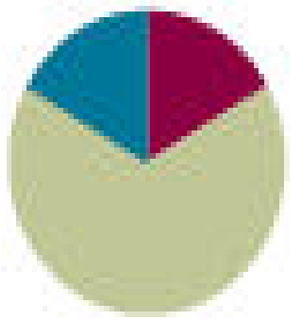
Concept Development:
(T) Large instructional clock with gears, clock (Template), document camera (if available), crayon, sentence strips to post vocabulary: half past, a quarter past, a quarter to
(S) clock (Template) printed on cardstock, scissors, crayon, brad fastener, personal white board

Lesson 13

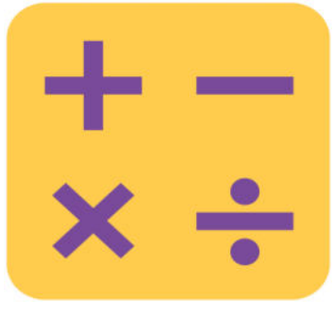
Objective: Construct a paper clock by partitioning a circle into halves and quarters, and tell time to the half hour or quarter hour.

Suggested Lesson Structure

Fluency Practice	(10 minutes)
Concept Development	(40 minutes)
Student Debrief	(10 minutes)
Total Time	(60 minutes)



I can construct a paper clock by partitioning a circle into halves and quarters, and tell time to the half hour or quarter hour.



Fluency

Rename for the Smaller Unit

I’m going to give you a number of hundreds and tens. I want you to rename 1 of the hundreds for 10 tens and then tell me how many hundreds and tens. Ready?

1 hundred 1 ten = ____ tens

2 hundreds = 1 hundred ____ tens

2 hundreds = 1 hundred 9 tens ____ ones

Fluency

Subtraction with Renaming

Slide the place value chart template into your personal white board.

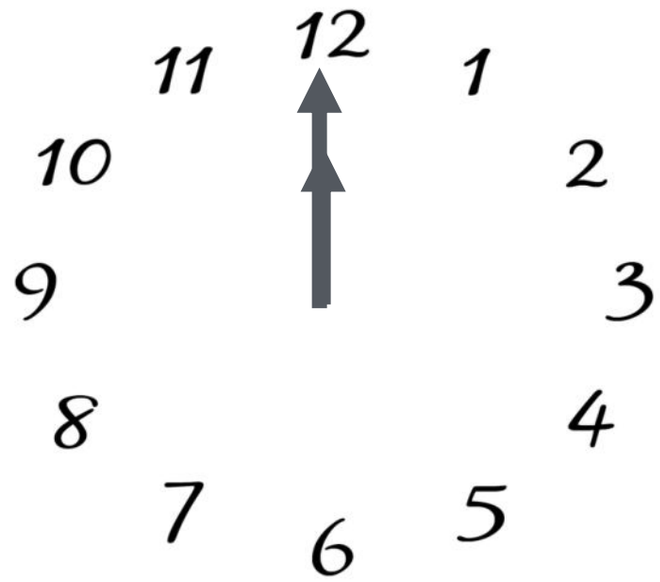
132 – 118 Let's use a chip model to subtract. On your board, record your work using the algorithm.

183 – 129

278 – 159

Concept Development

Part 1: Brief Review Using a Geared Clock



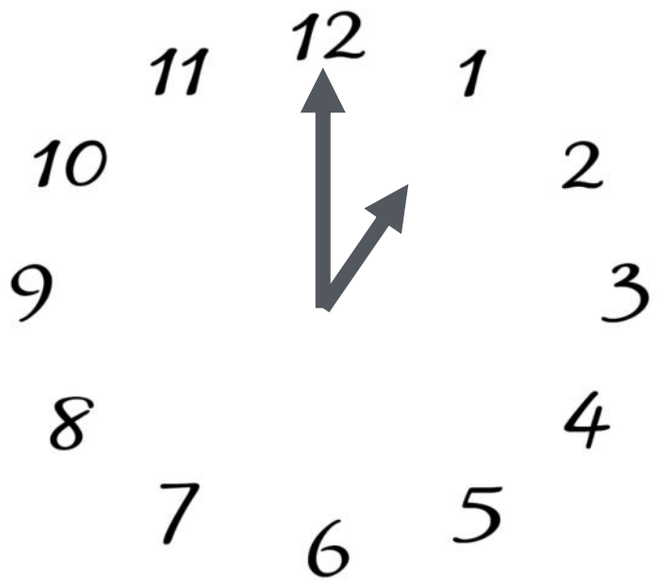
Where is the minute hand?

Where is the hour hand?

What time is it?

Concept Development

When the minute hand moves all the way around the clock, it has been 60 minutes, or 1 whole hour. When 1 hour passes, what time will it be?



Where is the minute hand?

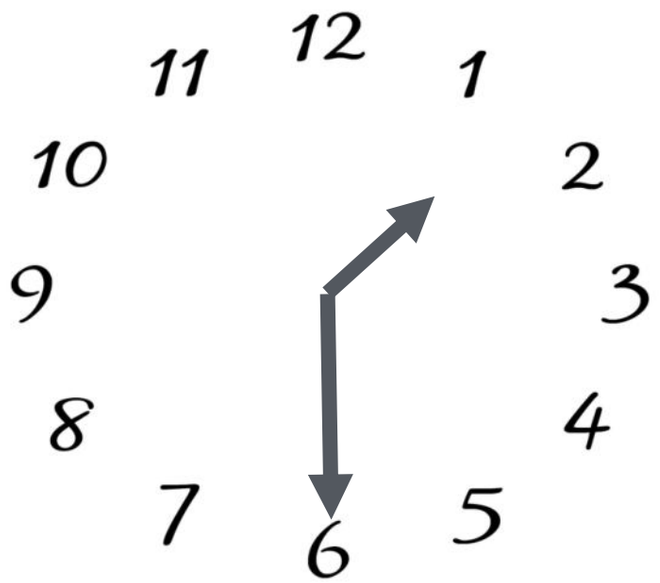
Where is the hour hand?

What time is it?

Concept Development

When half an hour has passed, the minute hand is halfway around the circle.

At what number did the minute hand stop?



And the hour hand is halfway between the 1 and…?

What fraction of the What fraction of the whole hour has passed?

This is why we call this time half past the hour. Let’s read this time together as half past 1.

This is why we call this time half past the hour. Let’s read this time together as half past 1.

Concept Development

Part 2: Constructing a Paper Clock

Cut out the circle in front of you just outside the dark line along the dotted line.

Now, fold the circle in half along one set of dotted lines.

Unfold your circle, and look at it. How many equal parts do we have now?

What fraction is each equal part?

Let’s trace along the folded line to clearly show the 2 halves.

Concept Development

What number is at the top of the clock?

Let’s write that in

How about at the bottom of the clock?

Let’s fill that in.

Concept Development

Now, let’s take our circle and fold it in half again along the same line as before. And then let’s fold it in half one more time. That means that we will fold along the flat part so the rounded parts are matching each other.

Unfold the circle.
What fraction is each part now?

How did we get from halves to fourths?
Turn and talk.

We had 2 halves, and now we have 4 fourths! Let’s trace along this second folded line.

Concept Development

Part 3: Using a Paper Clock to Tell Time to the Half or Quarter Hour

Show me twelve o’clock.

Now, move your minute hand to the 3.

What fraction of an hour passes when the minute hand moves from the 12 to the 3? Turn and talk.

It moved 1 fourth, or a quarter, of an hour. So, when the minute hand points to 3, we say it’s a quarter past the hour.

Concept Development

Your clocks should still show a quarter past twelve. Move the minute hand to show where the next quarter hour ends.

At what number did the minute hand stop?

Think back to what we learned earlier. What fraction of the hour has passed when the minute hand is on 6?
Turn and talk.

Let’s keep going. Where does the next quarter hour end?
Move the minute hand to show where the next quarter hour ends.

Concept Development

What fraction of the hour has passed when the minute hand is on 9? Turn and talk.

3 quarters past the hour. And how many quarters would be left until the next hour?

When we tell the time, we usually call it a quarter to the hour. For example, my clock shows one o’clock. Now, it shows a quarter to two

Concept Development

Part 4: Relating Minutes to a Half and a Quarter Hour

Let’s fill in the missing numbers on our clocks.

Who remembers what each little mark on the side of the clock means?

And how many minutes are between one number and the next?

Concept Development

So, we can skip count by…?

Let’s count by fives to see how many minutes are in this quarter hour.

Write 15 on the outside of the circle next to the number 3.

How many minutes are in a quarter hour?

Let’s keep counting by fives

Write 30 below the 6.

Concept Development

Keep going.

Write 45 on the outside of the circle next to the 9.

Let’s do the last quarter hour

Write 60 above the 12.

When the minute hand moves through all 4 quarters, we have completed what whole unit?

How many minutes past the hour is it? Turn and talk.

Concept Development

The 3 represents 15 minutes past the hour, 3 groups of 5 minutes. And what fraction of the hour does it also represent?

A quarter of an hour is also 15 minutes.

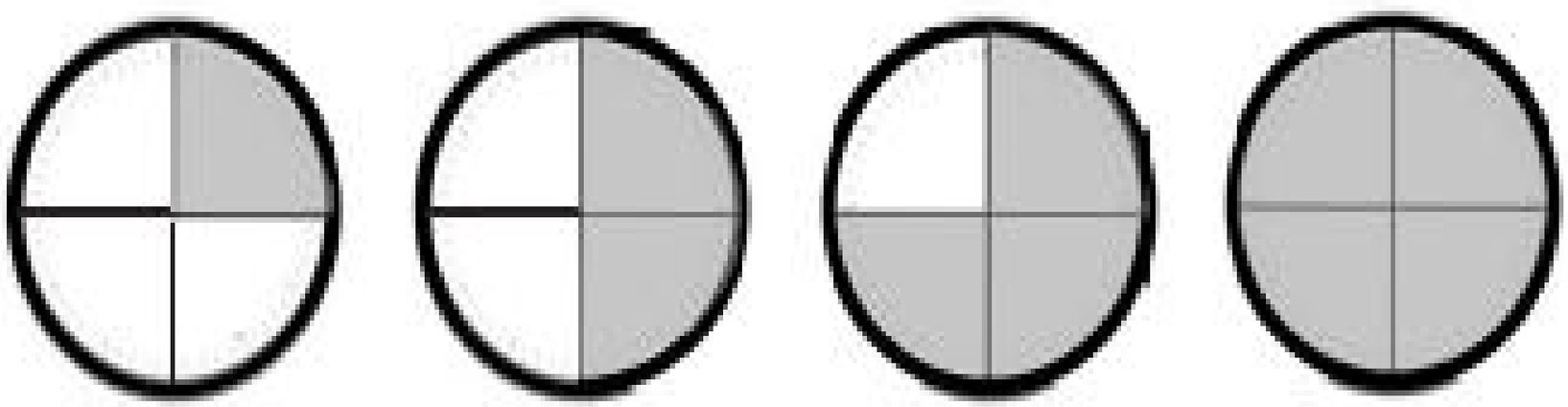
Turn and talk. When the minute hand points to the 6, how many minutes past the hour is it?

Yes! Half an hour is 30 minutes. Great!

On your personal white boards, write the time shown on your clocks in both words and numbers.
Remember, we write the hour, then a colon, then the number of minutes.

Name _____ Date _____

1. Tell what fraction of each clock is shaded in the space below using the words *quarter, quarters, half, or halves.*



Debrief

Review your solutions for the Problem Set

For Problem 1, when telling time, what word(s) do you use to describe 1 fourth past the hour? What about 2 fourths past the hour? And 3 fourths past the hour?

For Problem 2(b), how much time has passed? What fraction of the whole hour is 15 minutes? Explain why this is called quarter past. What fraction of the hour is left?

For Problem 2(c), if it is 3:30, why isn't the hour hand pointed directly at the number 3?

Debrief

Review your solutions for the Problem Set

For Problem 3, explain how you know that 3:45 and a quarter to four represent the same time.
Turn and talk.

What is similar about describing these two times: 12:15 and 12:45?

Using what you know about halves and quarters, how much time has passed from 1:15 to 1:45?

Exit Ticket

Name _____ Date _____

Draw the minute hand on the clock to show the correct time.

Half past 7

12:15

A quarter to 3