Eureka Math

2nd Grade
Module 2
Lesson 8

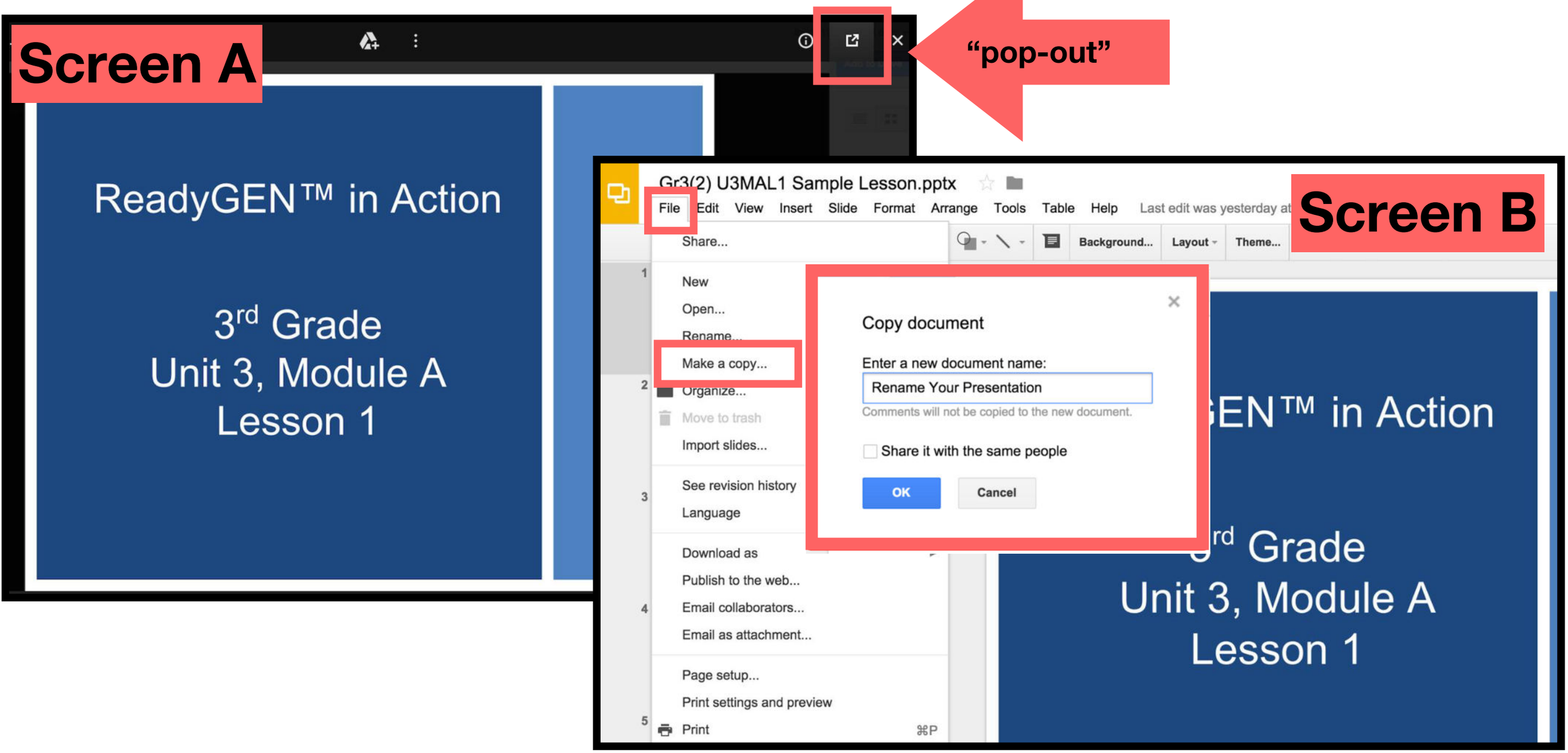
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

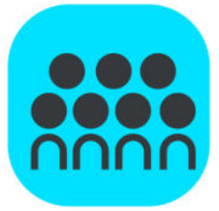
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

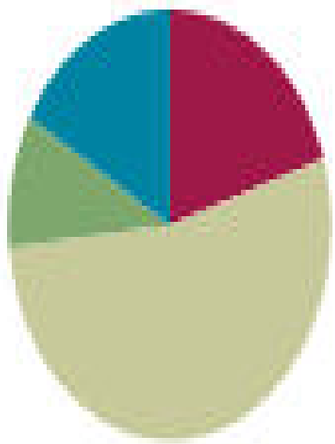
Small Group Time

Lesson 8

Objective: Solve addition and subtraction word problems using the ruler as a number line.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(6 minutes)
Concept Development	(32 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



Materials Needed:

Concept Development:

- (T) 1 piece construction pape,
- (T) torn, meter strip
- (S) meter strip
- (S) 1 piece 12” x 18” construction paper
- (S) white board

I can solve addition and subtraction word problems using the ruler as a number line.

How Many More to Make a Meter?

For every number of centimeters I say, you say the number needed to make a meter. If I say 70 centimeters, you say 30 centimeters. Ready?

70 cm

Number sentence

70 cm + 30 cm = 1 meter

40 cm

Number sentence

40 cm + 60 cm = 1 meter

20 cm

Number sentence

90 cm

Number sentence

10 cm

Number sentence

9 cm

Number sentence

11 cm

Number sentence

Sprint

A

Number Correct: _____

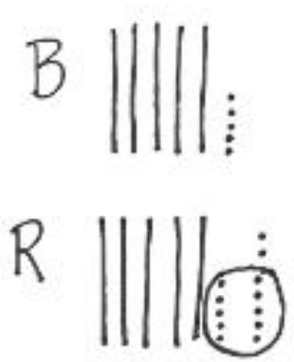
Making a Meter

1.	10 cm + ____ = 100 cm	
2.	30 cm + ____ = 100 cm	
3.	50 cm + ____ = 100 cm	
4.	70 cm + ____ = 100 cm	
5.	90 cm + ____ = 100 cm	
6.	80 cm + ____ = 100 cm	
7.	60 cm + ____ = 100 cm	
8.	40 cm + ____ = 100 cm	

23.	____ + 62 cm = 1 m	
24.	____ + 72 cm = 1 m	
25.	____ + 92 cm = 1 m	
26.	____ + 29 cm = 1 m	
27.	____ + 39 cm = 1 m	
28.	____ + 59 cm = 1 m	
29.	____ + 89 cm = 1 m	
30.	____ + 88 cm = 1 m	

Application Problem

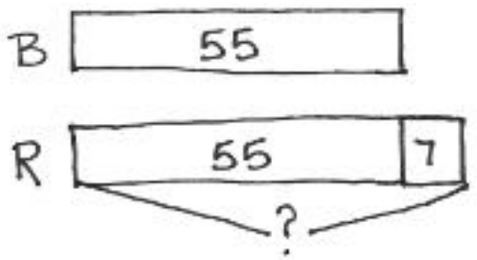
Bill the frog jumped 7 centimeters less than Robin the frog. Bill jumped 55 centimeters. How far did Robin jump?



$55 + 7 = 62$

$5 \quad 2$

Robin jumped 62 centimeters.



$55 + 7 = 62$

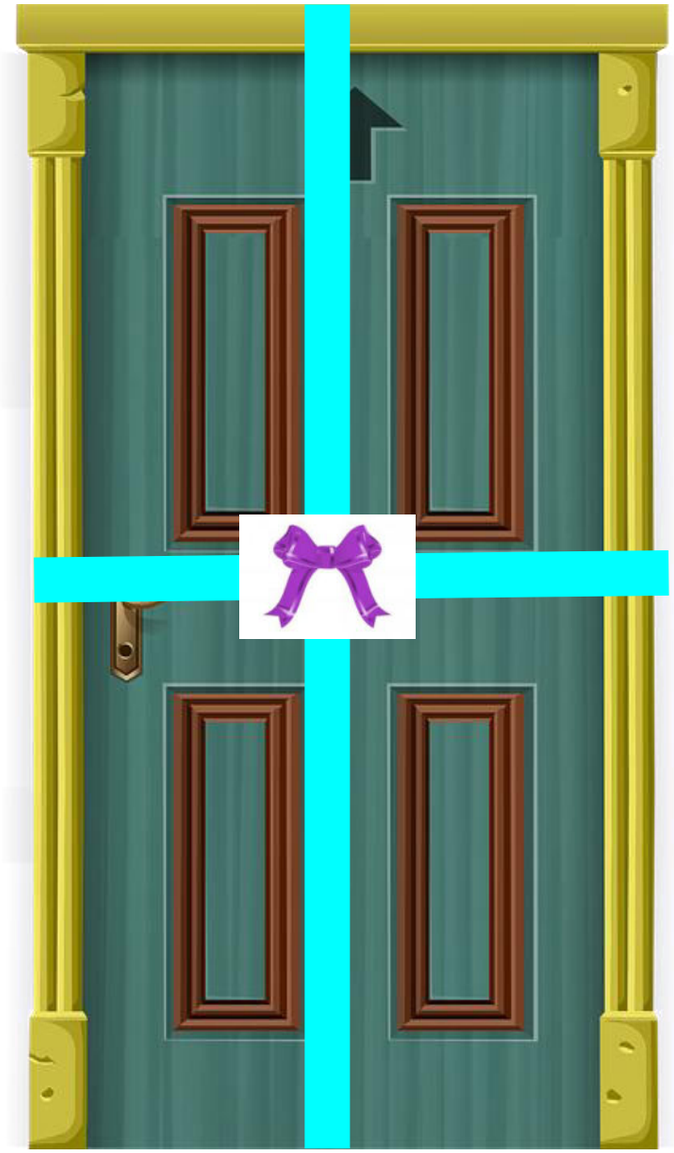
$5 \quad 2$

$55 + 5 = 60$

$60 + 2 = 62$

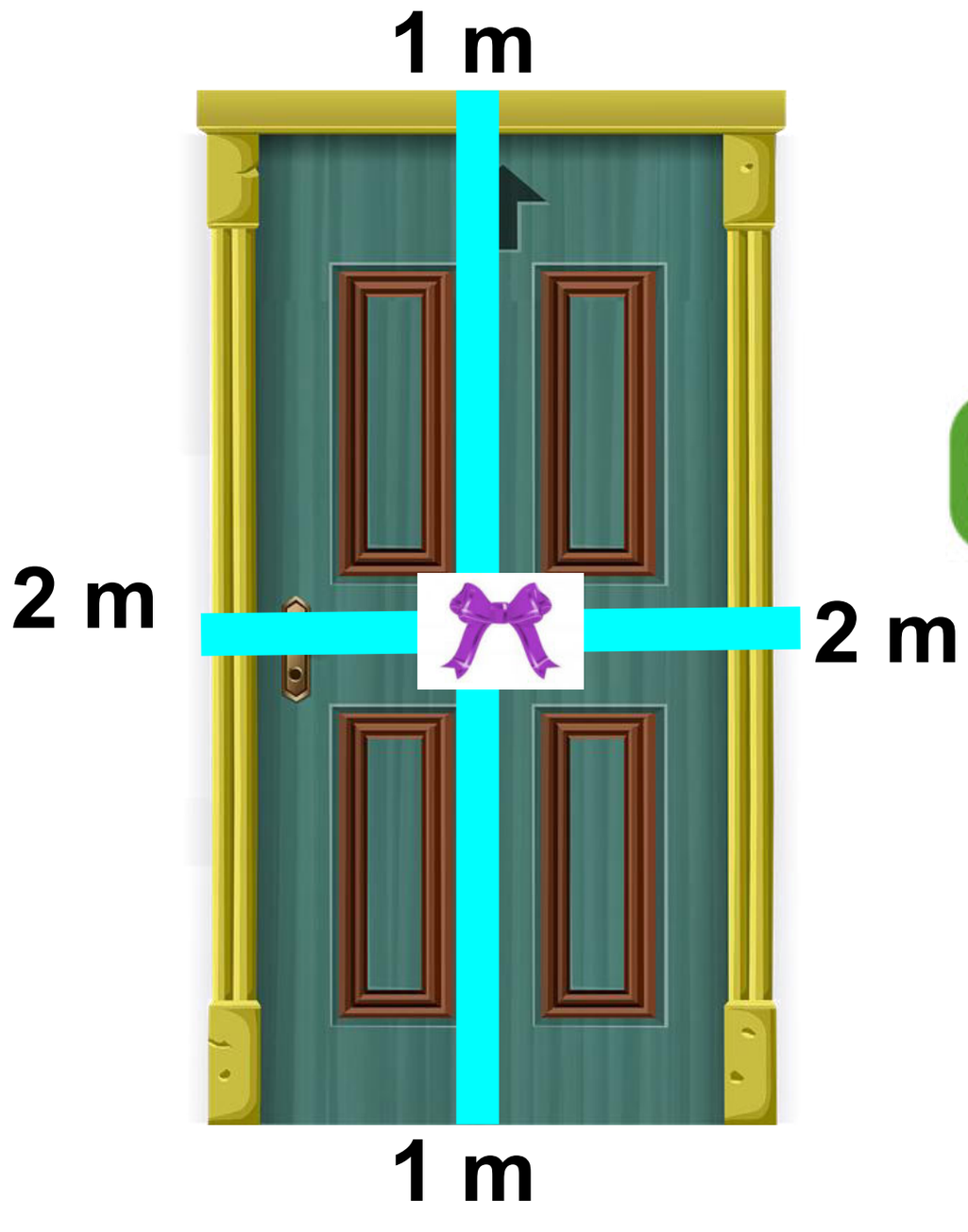
Robin jumped 62 centimeters.

Concept Development



I am throwing a party and want to decorate my house. I will start with my front door and put some ribbon around its edges. How can we figure out how long the ribbon should be?

Concept Development



I used a meter stick to find the measurements.

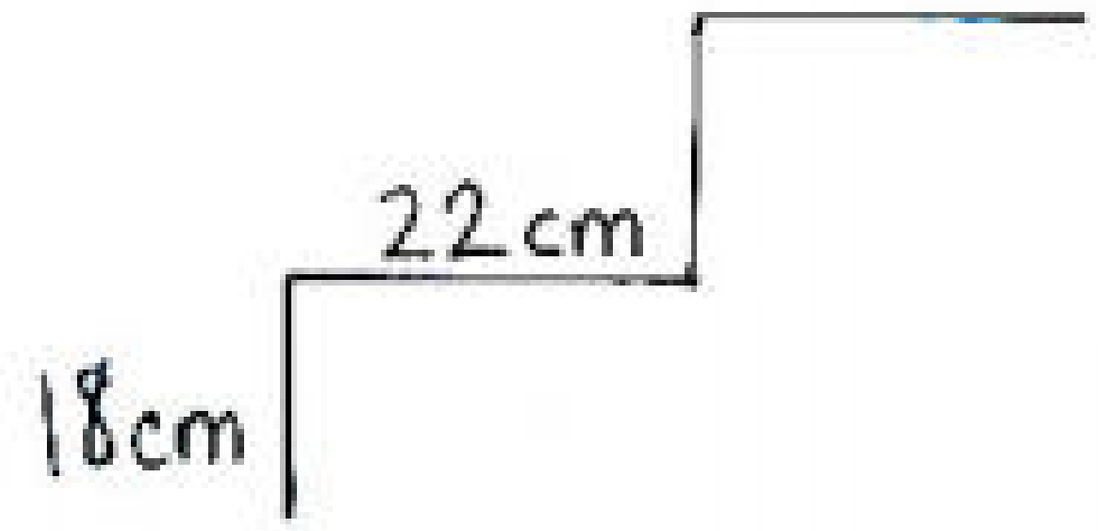
How long does the ribbon need to be to go all the way around my door? Share with a partner

Concept Development

I also want to string lights up one side of the steps leading to my front door. Help me figure out the length of the string of lights if they line the edges of the steps.

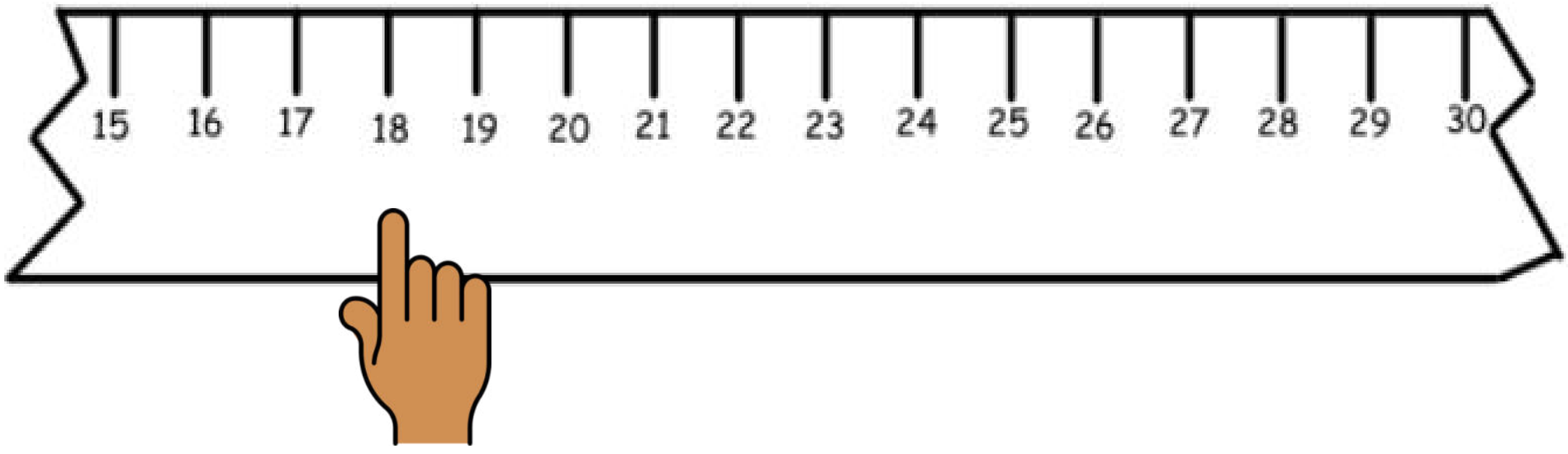
There are two steps.

How many centimeters of lights do I need to line the entire length of both steps?

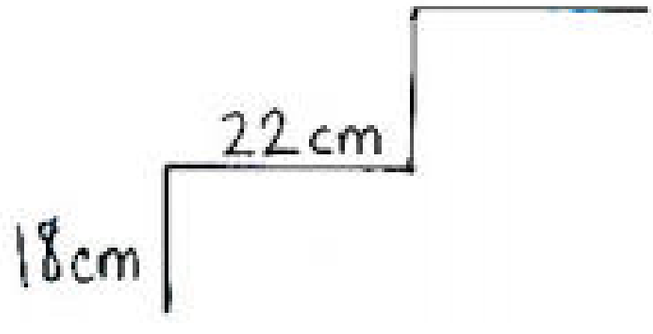


Concept Development

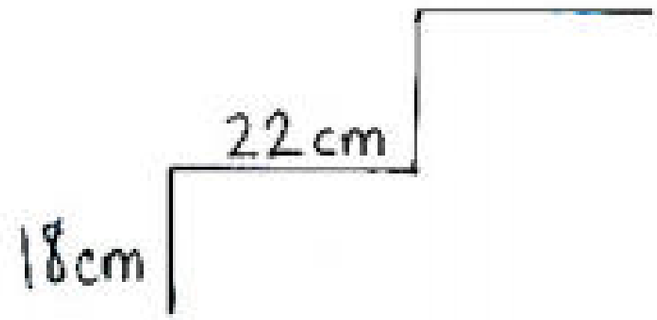
Put your finger on 0 on your meter strip. Slide your finger up to 18 centimeters.



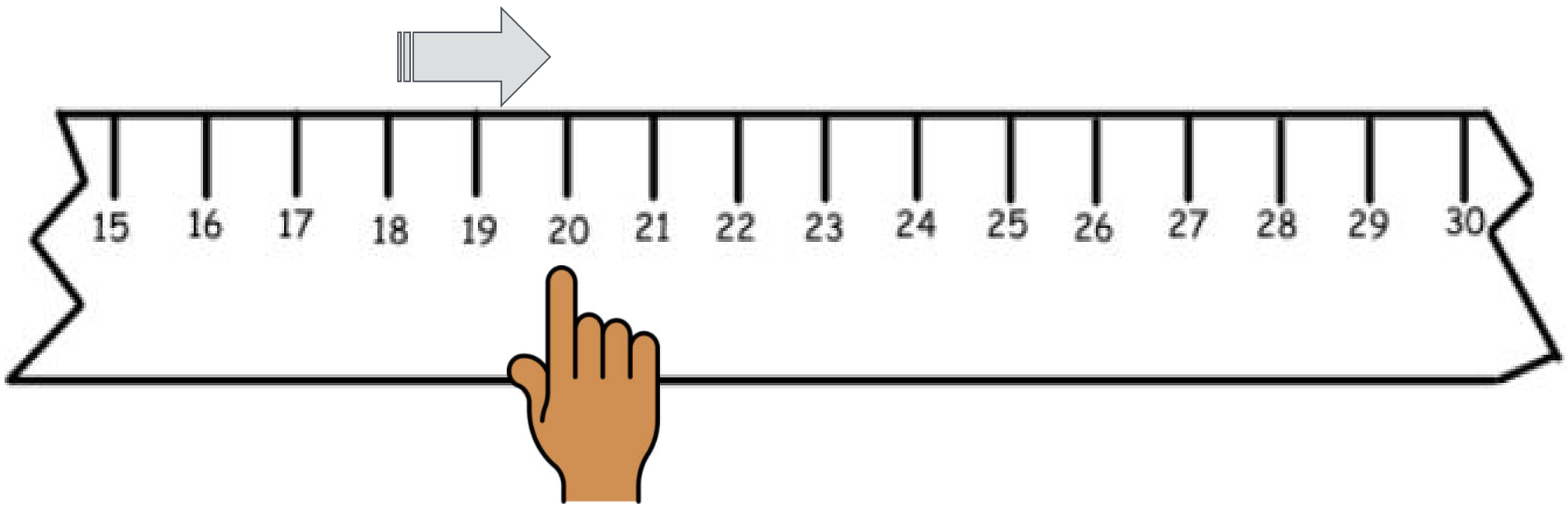
To add 22 centimeters, we can think of this meter strip like a number line. To make a ten, what part of 22 should we add to 18 first?



Concept Development

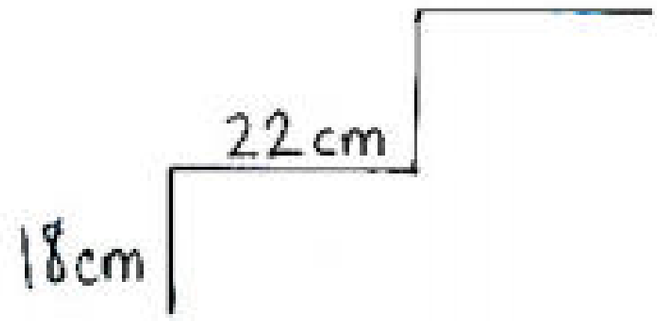


Where are we on the number line?



How many more centimeters do we need to slide our finger on the number line?

Concept Development



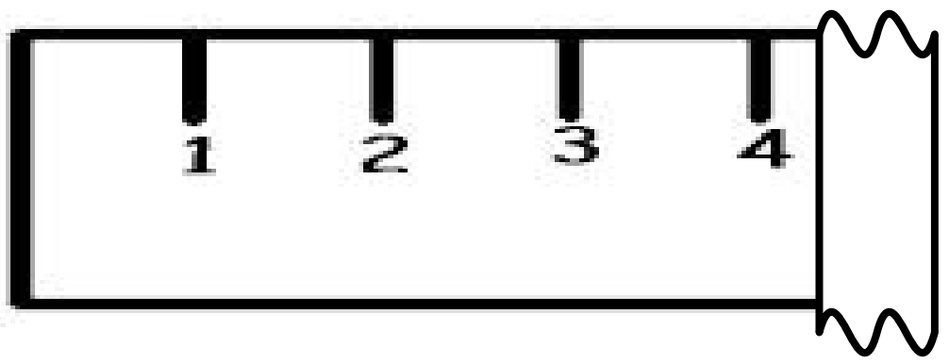
Where will our finger stop?

Where will we be on the meter strip when we add the second stair? How do you know?

I have a string of lights that is 1 meter long. Is it long enough to reach the top of the steps?

Concept Development

I also want to hang a party sign with this piece of string. I want to know the length of the string, but I tore my meter strip, and now it starts at 4 centimeters. Can I still use it to measure?

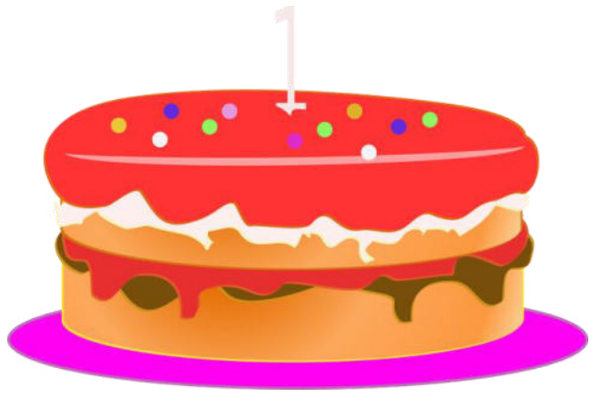


Let's tear our meter strip at 4 cm.

Try it! Line up your string with the torn meter strip. Where does the string end?

Now, let's take away 4 centimeters from 29 centimeters. What is the length of the string?

Concept Development



I also ordered a cake, which is the same size as this piece of construction paper. The table I want to put it on is the same size as your desks. Can you figure out the length of the cake and the desk to see how much extra space there will be?

With your partner, measure the length of the cake and desk, and then find the difference. Record your answers on your personal white boards.

Concept Development

What strategy did you and your partner use to measure the lengths with the torn meter strip?

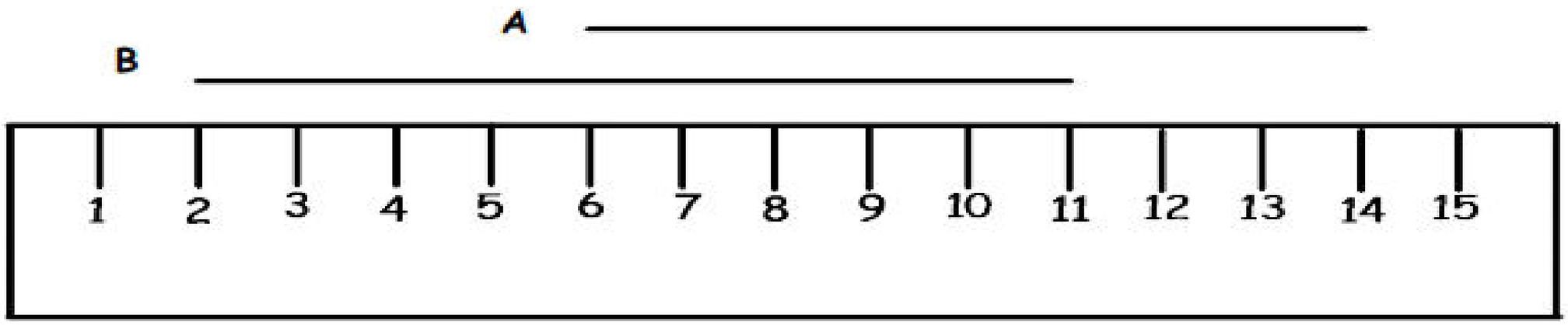
What is the difference between the length of the table and the length of the cake? Give a complete number sentence.

So, we know we have 15 centimeters next to the cake. I'm going to put the cake at the bottom of the table. Let's repeat the process to see how much space we will have above it. Measure the width of the cake and table and find the difference.

Problem Set

Name _____ Date _____

1.



a. Line A is _____ cm long.

b. Line B is _____ cm long.

c. Together, Lines A and B measure _____ cm.

Debrief

- Explain to your partner how you solved Problem 1. What similarities or differences were there in your solution methods?

- What strategies did you use to solve Problem 2? Invite students to compare their drawings.

- How can you solve a problem with a ruler that does not start at zero?

- How is a ruler similar to a number line?

Debrief

- Look at Problem 4. What math strategies did you need to know in order to solve this problem? (Counting on, skip counting, adding, and subtracting.)

- How did we use addition and subtraction today?

Exit Ticket

Name _____ Date _____

1. Use the ruler below to draw one line that begins at 2 cm and ends at 12 cm. Label that line R. Draw another line that begins at 5 cm and ends at 11 cm. Label that line S.

   a. Add 3 cm to Line R and 4 cm to Line S.

   b. How long is Line R now? _____ cm

   c. How long is Line S now? _____ cm

   d. The new Line S is _____ cm (shorter/longer) than the new Line R.