Eureka Math

4th Grade
Module 4
Lesson 6

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!

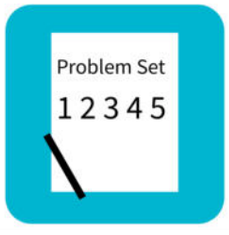
Directions for customizing presentations are available on the next slide.

Icons

Read, Draw, Write

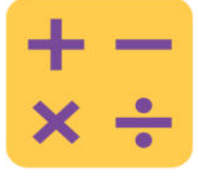
Learning Target

Personal White Board



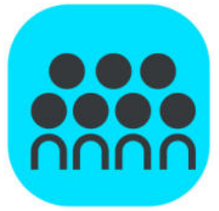
Problem Set

Manipulatives Needed



Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

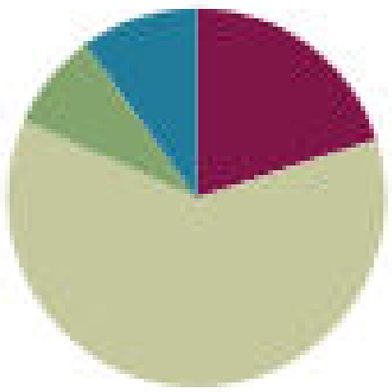
Small Group Time

Lesson 6

Objective: Use varied protractors to distinguish angle measure from length measurement.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(5 minutes)
Concept Development	(37 minutes)
Student Debrief	(6 minutes)
Total Time	**(60 minutes)**



I can use varied protractors to distinguish angle measure from length measurement.

Divide Using the Area Model

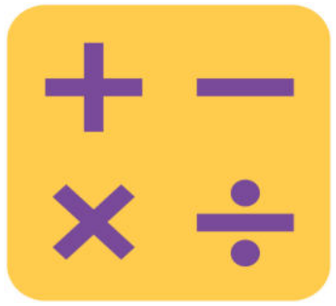
Write a division expression for this area model.

Label the length of each rectangle in the area model.

Solve using the standard algorithm.

Draw and Identify Two-Dimensional Figures

Look on page 89 for directions.



Physiometry

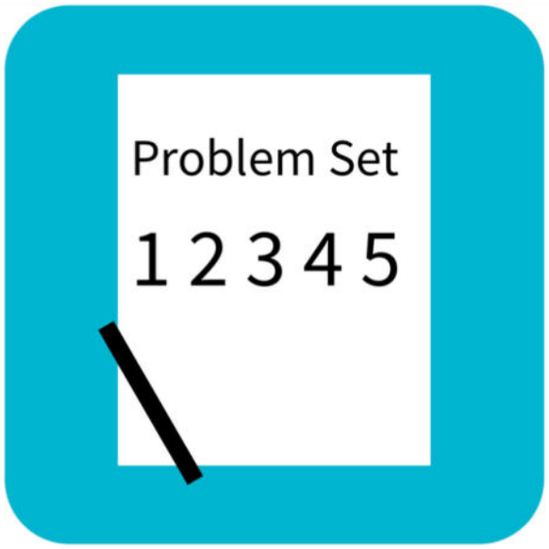
Look on page 90 for directions.

Application Problem

- Fold Circle A and Circle B as you would to make a right angle template.
- Trace the folded perpendicular lines.
- How many right angles do you see at the center of each circle?
- Did the size of the circle matter?

Constructing a Paper Protractor

Look at pages 91-94 for instructions and discussion questions.

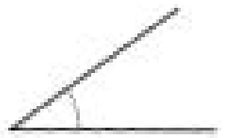


Problem Set

Name _____ Date _____

1. Use a protractor to measure the angles, and then record the measurements in degrees.

a.



b.

Debrief

Any combination of the questions below may be used to lead the discussion.

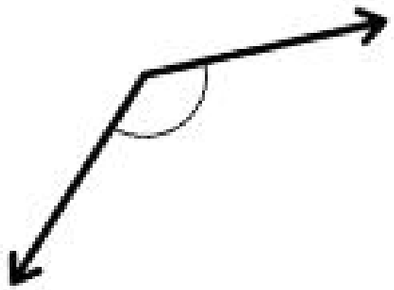
- In Problem 1, which angle had the same measure as $\angle G$? $\angle I$?
- In Problem 1, which angles had the same angle measure but different side length measures?
- For Problem 2, discuss your experience of measuring with different protractors. Describe how the **length of an arc** on each protractor did or did not affect the measure of the given angle.
- How many degrees did the angles in Problem 3 measure? What type of angle is the angle in part (a)? We know a straight angle forms a straight line. Points A, B, and C create $\angle ABC$ and $\overline{ABC}$. When three or more points are found on a line, we call them **collinear** points. Are points D, E, and F collinear? Why not?
- Take a look at your 180° protractor. Find pairs of numbers that label the two scales, such as 150° and 30°. Name other pairs of numbers. What do you notice about the pairs of numbers?
- How did the Application Problem help you understand that an angle measure remains constant and is not a length measure?

Exit Ticket

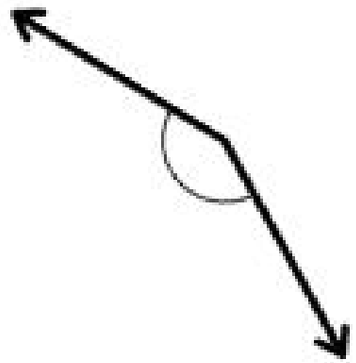
Name _____ Date _____

Use any protractor to measure the angles, and then record the measurements in degrees.

1.



2.



3.

4.