Eureka Math

4th Grade
Module 4
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.

Icons

Read, Draw, Write

Learning Target

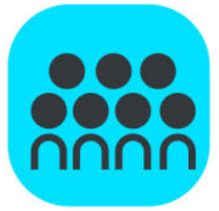
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

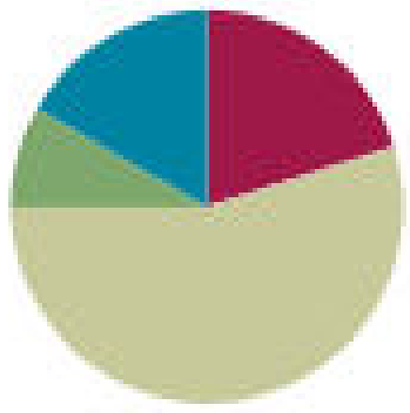
Small Group Time

Lesson 8

Objective: Identify and measure angles as turns and recognize them in various contexts.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Application Problem	(5 minutes)
Concept Development	(33 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**

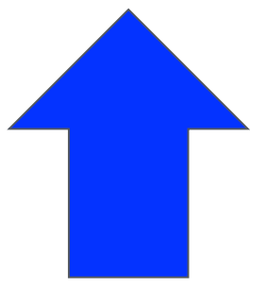


I can identify and measure angles as turns and recognize them in various contexts.

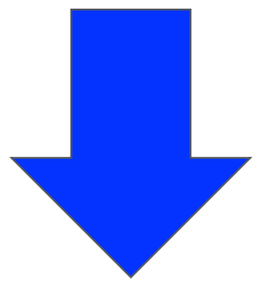
Group Counting

Count by nines to 36.

Say all of the numbers. Watch my fingers to know whether to count up or down. A closed hand means stop.



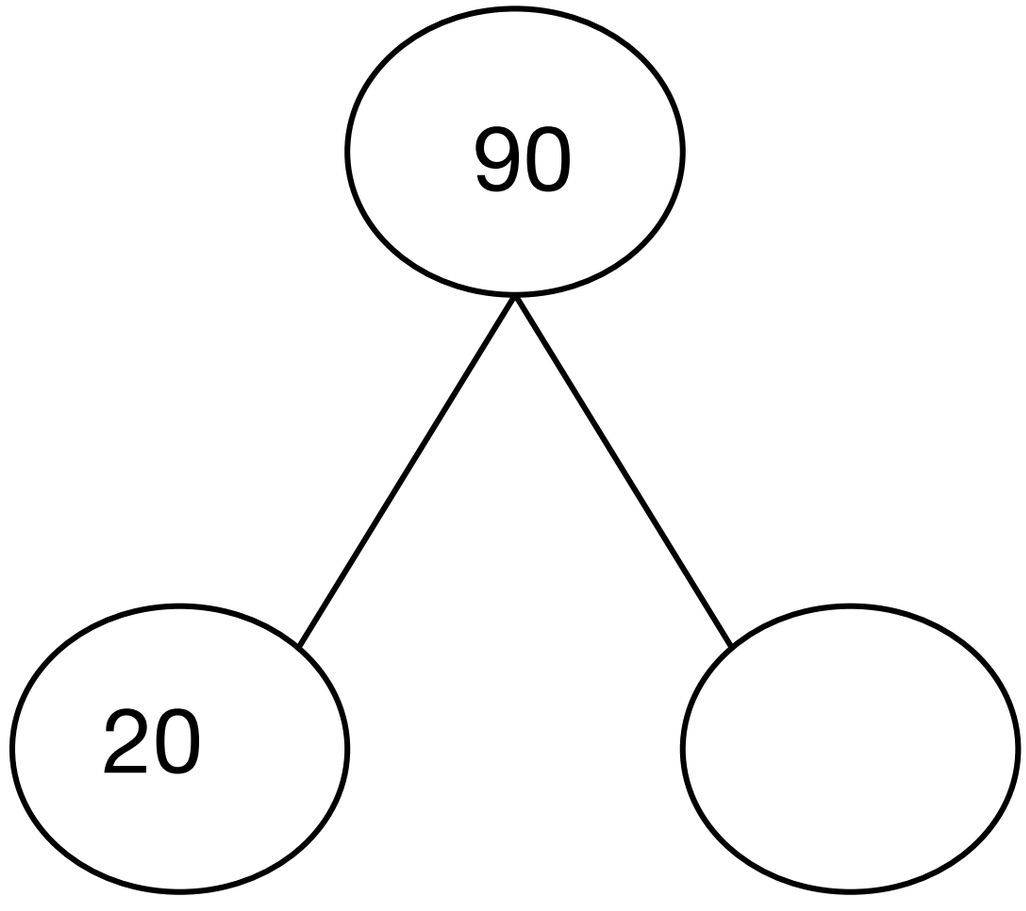
Count up



Count down

Break Apart 90, 180, and 360

On your personal white boards, write the number bond, filling in the unknown part.



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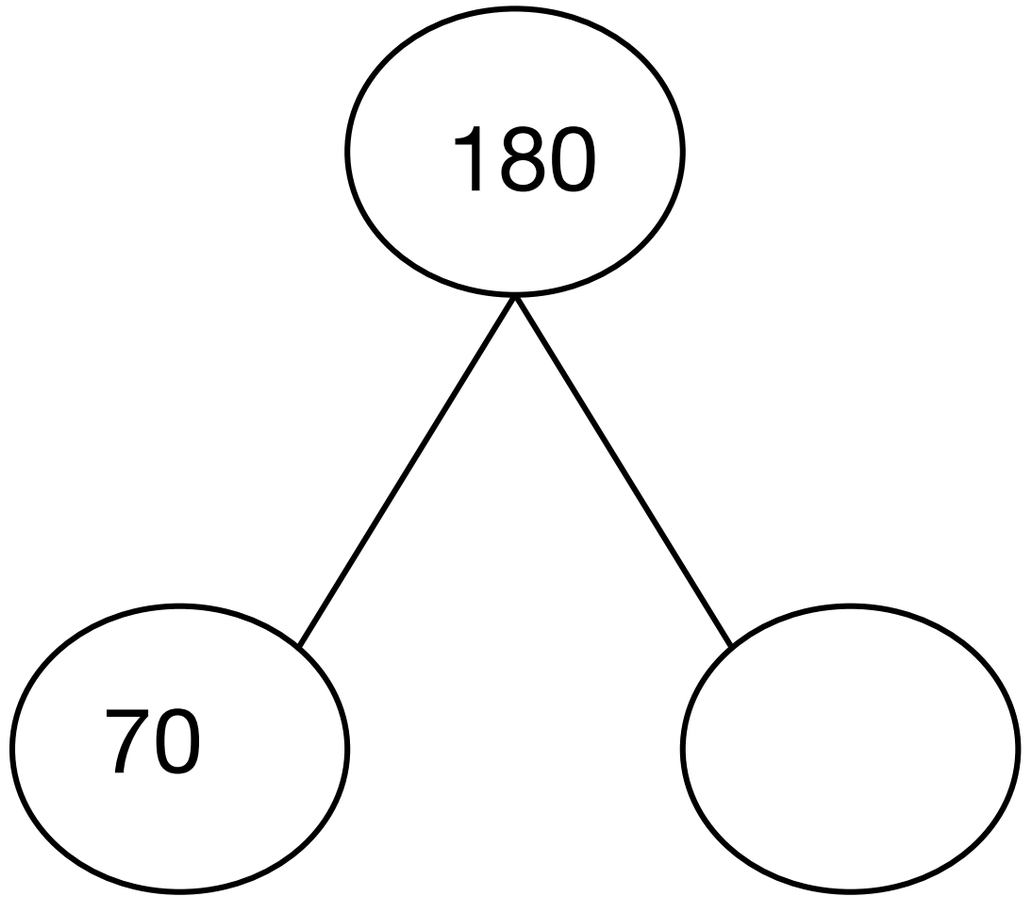

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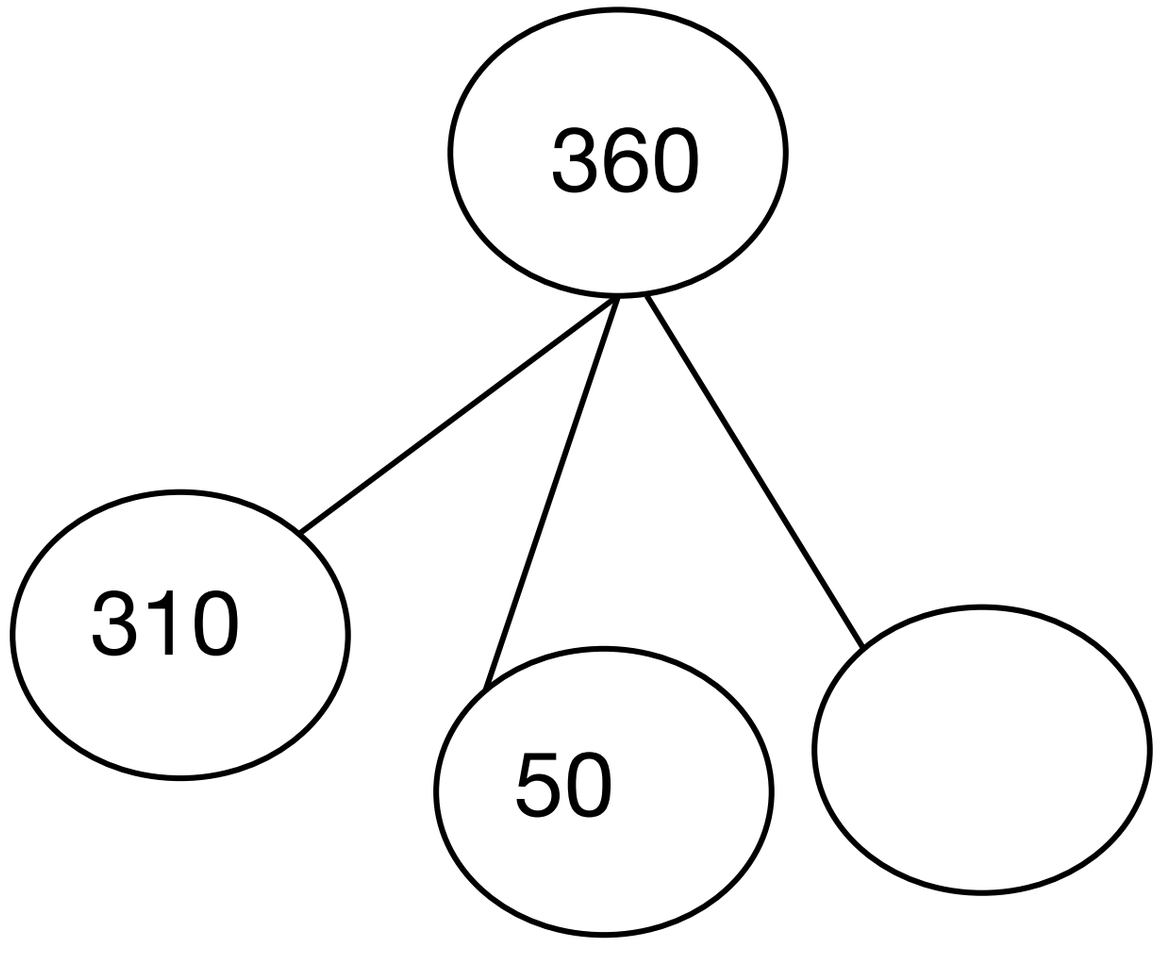
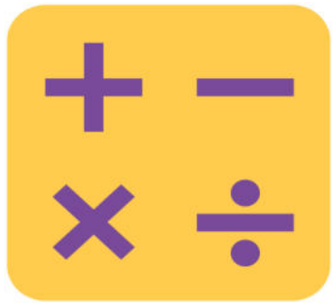




Physiometry

Look on page 119 for directions.

Sketch Angles

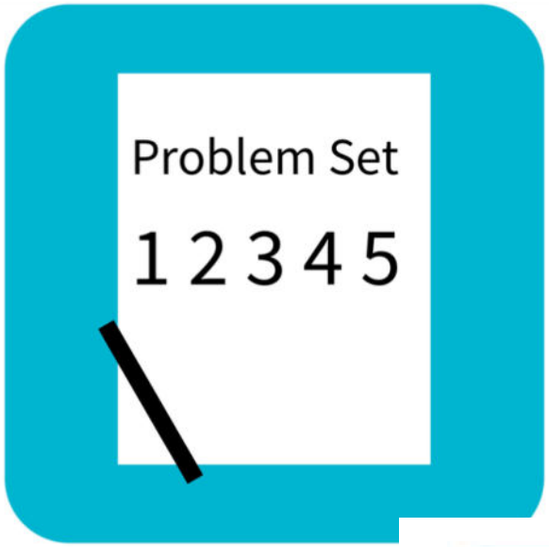
On your personal white boards, show me ∠ABC
That measures about 90°.
What do we call an angle that measures 90°?
On your boards, show me ∠DEF that measures about 80°.
What type of angle did you draw?

Application Problem

Draw a series of clocks that show 12:00, 3:00, 6:00, and 9:00. Use an arc to identify an angle and estimate the angle created by both hands on the clock.

Concept Development

Look at pages 121-122 for instructions and discussion questions.



Problem Set

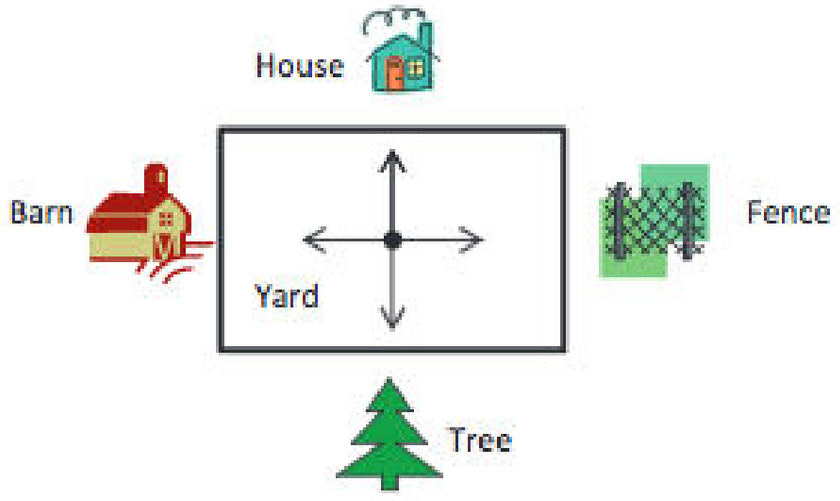
Name _____ Date _____

1. Joe, Steve, and Bob stood in the middle of the yard and faced the house. Joe turned 90° to the right. Steve turned 180° to the right. Bob turned 270° to the right. Name the object that each boy is now facing.

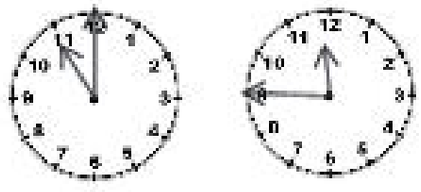
Joe _____

Steve _____

Bob _____



2. Monique looked at the clock at the beginning of class and at the end of class. How many degrees did the minute hand turn from the beginning of class until the end?



Debrief

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

- Why was there confusion with turning 90°, but not with turning 180° or 360°? How can the terms clockwise and counterclockwise be used in Problem 7?
- Why is there more than one answer for Problem 7?
- Does it matter in Problem 8 if you turned 180° to the right or 180° to the left? Explain.
- What do you notice about the terms used to tell time? (All of the benchmark angles have terms, i.e., half past, quarter of, quarter past.)
- Stand face-to-face with your partner. Ask your partner to turn to the left. Why does it appear to you that she turned to the right? In each problem in this lesson, when someone turns to the right or left, it is from his or her perspective. What does this mean?

Exit Ticket

Name _____ Date _____

1. Marty was doing a handstand. Describe how many degrees his body will turn to be upright again.

2. Jeffrey started riding his bike at the ★. He travelled north for 3 blocks, then turned 90° to the right and rode for 2 blocks. In which direction was he headed? Sketch his route on the grid below. Each square unit represents 1 block.