MATH NEWS

Grade 4, Module 4, Topic B

4th Grade Math

Module 4: Topic B: Angle Measurement

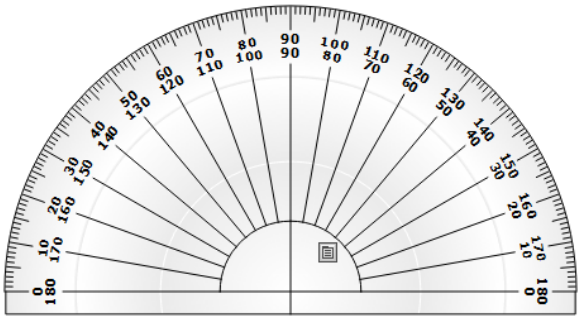
Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material which is taught in the classroom. Module 4 of Eureka Math (Engage New York) covers angle measures and plane figures.

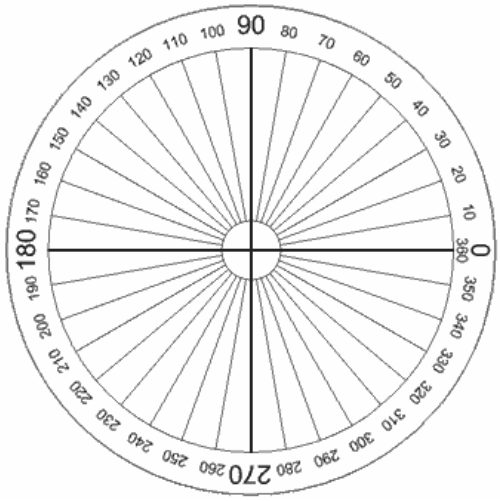
Protractor Types

Students will use two different types of protractors in class.

<u>The Standard Protractor or Half Protractor</u>



<u>The Circular Protractor</u>



OBJECTIVES OF TOPIC B

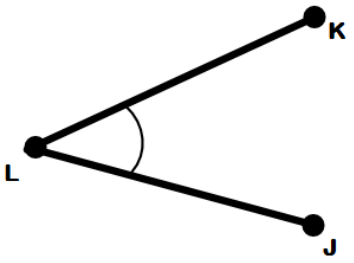
- Use protractors to measure and draw angles.
- Sketch given angle measures and verify with a protractor.
- Identify and measure angles as turns and recognize them in various contexts.

Focus Area – Topic B

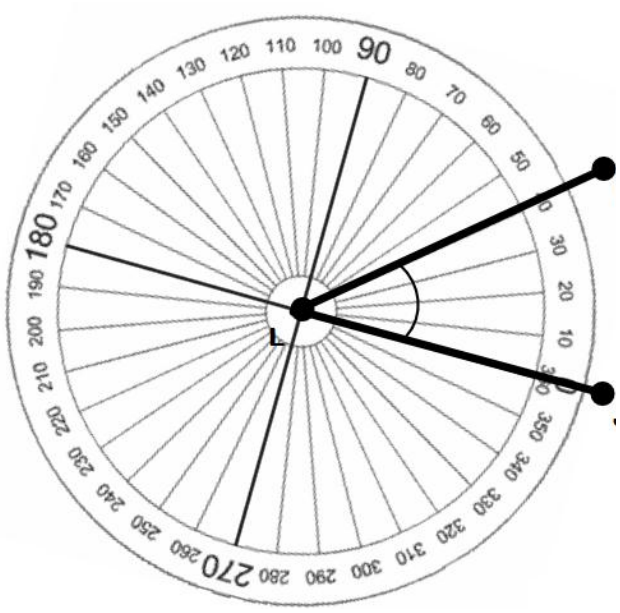
Angle Measurement

Example Problem and Answer

Students are asked to identify the measures of angles.



In this example, they will place the center point of the protractor over point **L**. Then match the 0° line of the protractor along line segment **LJ**. They can then read where line segment **LK** crosses the edge of the protractor to find the angle measurement.



The measure of this angle is 40°.

The students will write angle KLJ is 40° or

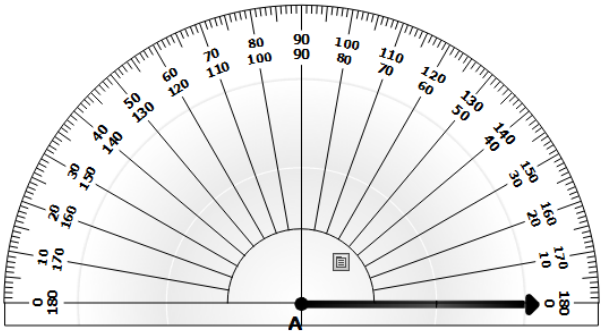
$\angle KLJ = 40°$

Using a Protractor to Draw Angles

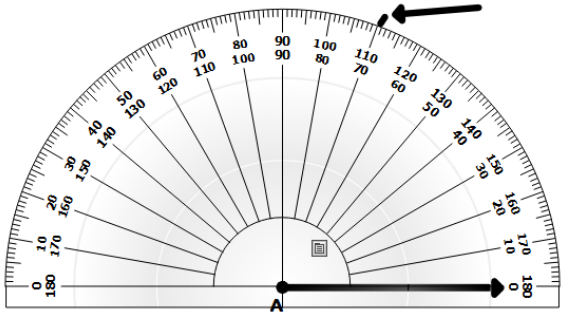
Students are asked to draw angles that match a certain degree measure. These are steps for drawing a 70° angle.

Step 1 - Draw a ray and label the endpoint A.

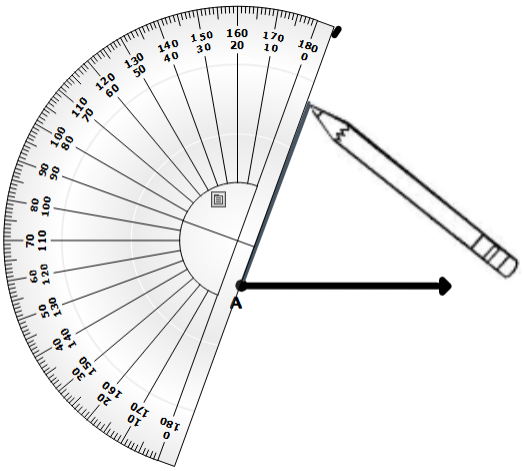
Step 2 - Line up the protractor, placing the center over endpoint A making sure the ray lines up with the 0° line.



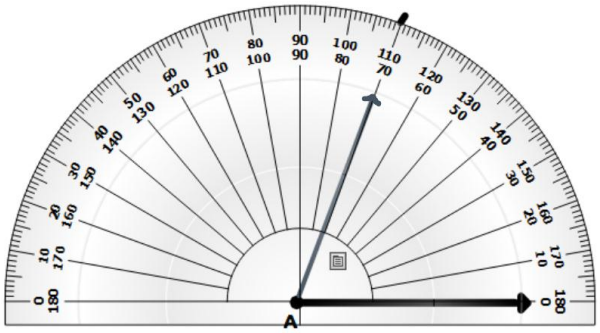
Step 3 - Find 70° on the protractor and draw a small point right above it.



Step 4 - Use the straight edge of the protractor to draw the next ray beginning at point A and continuing to the mark you made above the 70°.



Step 5 - Use the protractor to verify the angle is 70°.

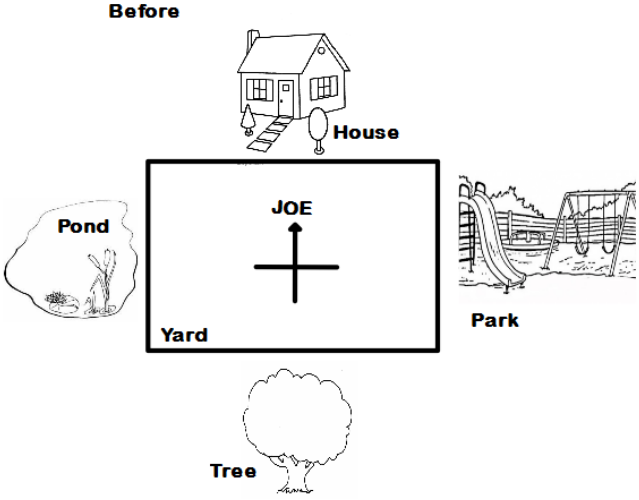


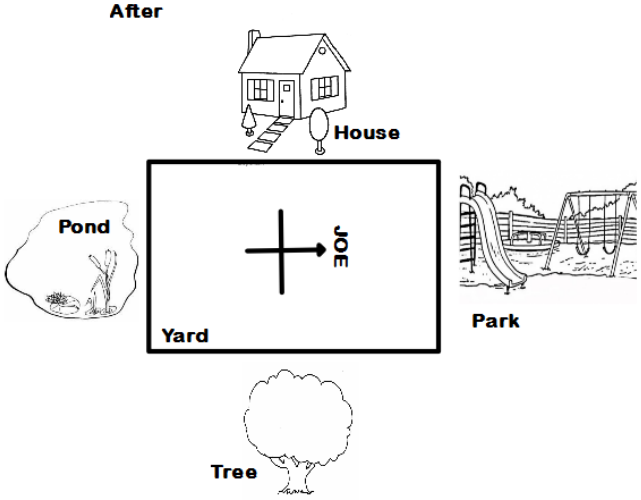
Angles as Turns

Students further explore angle measure as an amount of turning. They reason that a ¼ turn is a right angle and measures 90°, a ½ turn measures 180°, and a ¾ turn measures 270°. They go on to identify these angles in their environment.

Example Question and Answer

Joe stood in the middle of the yard and faced the house. Joe turned 90° to the right. To what was Joe now facing?





Answer: Joe would be facing the park.