Grade 4 – Unit 10
Angles

Parent Letter

Dear Fourth Grade Families,

In Unit 10, students will work on the following fourth grade Common Core standards in the Geometry (G) and Measurement and Data (MD) domains:

4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Unit 10 Concepts:
- Form & identify right, acute, and obtuse angles
- Estimate, measure, and draw angles
- Find missing angles

Unit 10 Vocabulary:
- Point, line, line segment, ray, angle
- Degree, benchmark angles
- Protractor
- Decompose

Ask questions like these to help your child become a productive mathematical thinker:

- What's the difference between acute and obtuse angles?

- What are some things in this room we can reasonably estimate form right angles?

- Why are benchmark angles helpful?

- What tool can you use to find the specific measure of an angle?

- If a right angle is split in half, what's the measure of each angle? How do you know?

Need a review?
Have your student login to Swun Math to access lesson support videos.

We encourage you to talk with your child daily about what was learned in math class.
Thank you for your support!

SWUN MATH
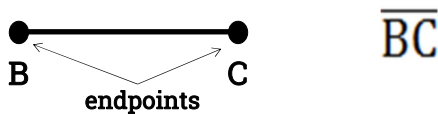DEVELOPING MATH MINDS FOR TOMORROW

Point: describes an exact location on a line, and is usually labelled with a capital letter

● A

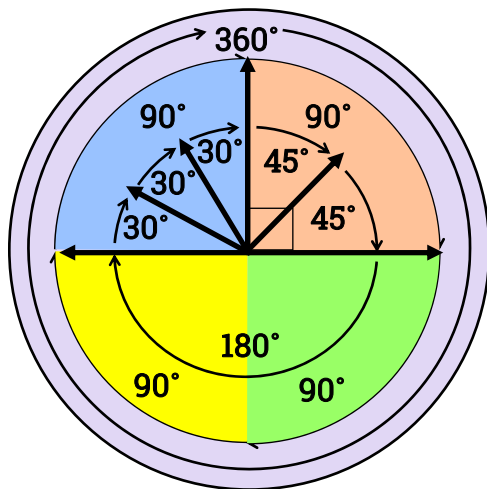**Line:** a straight path formed through two points that goes on forever in both directions

$\overleftrightarrow{BC}$

B   C

Line Segment: part of a line that ends at two endpoints

$\overline{BC}$

B   C

endpoints

Ray: part of a line that ends at one endpoint and extends forever in the other direction

$\overrightarrow{BC}$

B   C
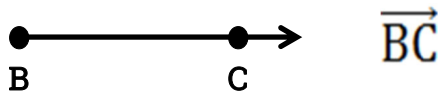
Benchmark angles: 30˚, 45˚, 90˚, 180˚ and 360˚

360˚
90˚   90˚
30˚   45˚
30˚
30˚   45˚
180˚
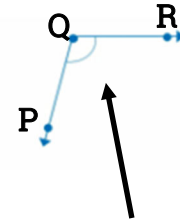90˚   90˚

Angle: the geometric shape formed by two lines with a shared endpoint as the vertex

B   L   Q   R
C   P
A   M   N
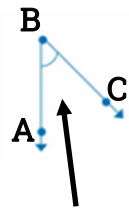
Acute Angle: measures less than 90˚
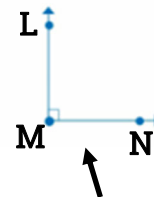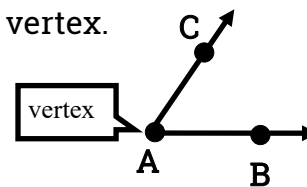
Right Angle: measures exactly 90˚

Obtuse Angle: measures more than 90˚, but less than 180˚

Degree (˚): the unit of the measure of an angle. There are 360˚ in a circle.

Angle name: can be named from three points (a point from each side and the vertex in the middle), or by just the vertex.

vertex

C

A   B

∠CAB

∠BAC

∠A

Protractor: a tool used to measure angle openings

outer scale   base line   inner scale

center/origin