

2D Shapes and Angles - Lesson 2 - Constructing Angles

Constructing Angles

To draw an angle with a given measure, we use a protractor.

To draw an angle that measures 145 degrees you would:

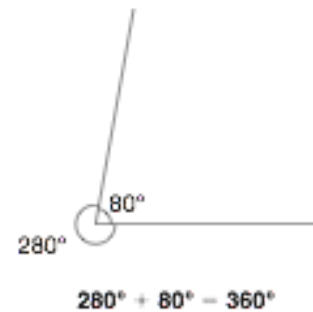
1. Use a ruler. Draw a horizontal line. Label it AB. Use the line as one arm of the angle.
2. Place the protractor on the arm. The B end of the arm will be on the center of the protractor. Make sure the arm lines up with the base line (bottom line) on your protractor.
3. Start at 0 degrees on the side closest to the point A and follow the arm all the way to 145 degrees. Create a tick mark at the top and label it C.
4. Remove the protractor and connect B and C.
5. You now have angle ABC. Label the angle with an arc and its measure (145 degrees).



280 degrees is a reflex angle. A full turn is 360 degrees.

To draw an angle that measures 280 degrees you would:

1. We will start by subtracting the reflex angle from the the full turn.
 $360^\circ - 280^\circ = 80^\circ$
2. Next we will draw an 80 degree angle the same as you would a 145 degree angle like we did above.
 - a. Follow the above steps 1 through 4.
3. When we label this angle, we don't draw our arc on the inside. This would indicate an 80 degree angle. Instead, we draw our angle on the outside. This is 270 degrees. We know this because of our calculations in step 1.



Practice Questions

Textbook MMS 6:

Pg 84 - Question - 2

MMS 6 - Practice Book:

Homework Sheet

1. Draw an acute angle. Without using a protractor, draw an angle that is 90° greater than the angle you drew. Measure the angle with a protractor to check. Explain how you drew the angle.
2. Use only a ruler to draw an angle that you think measures:
 - a. 90°
 - b. a little less than 90
 - c. about 45°
 - d. a little more than 90°
 - e. a little less than 180°

How can you check to see if you are correct? Show your work.

IXL: <https://ca.ixl.com/math/grade-6/measure-and-classify-angles>