

Homework & Practice 15-4

Measure and Draw Angles

Another Look!

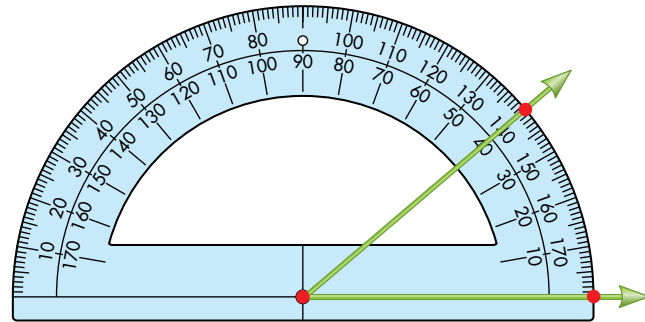
To measure an angle:

Place the protractor's center on the vertex of the angle and the 0° mark on one of the angle's rays. Read the number in degrees where the other ray of the angle crosses the protractor. If the angle is acute, use the lesser number. If the angle is obtuse, use the greater number.

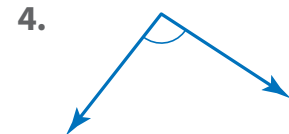
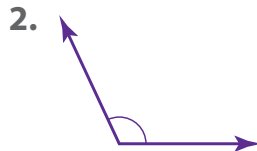
To draw an angle:

Draw a dot to show the vertex of the angle. Place the center of the protractor on the vertex point. Draw another point at the 0° mark and another point at the angle degree mark. Draw rays from the vertex through the other points.

You can use a protractor to measure or draw angles.



For **1–4**, measure each angle. Tell if each angle is acute, right, or obtuse.



For **5–12**, use a protractor to draw an angle for each measure.

5. 75°

6. 80°

7. 155°

8. 45°

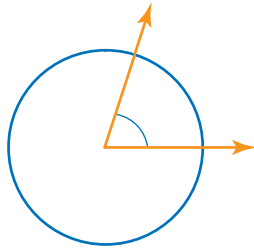
9. 135°

10. 180°

11. 5°

12. 90°

13. © **MP.2 Reasoning** The angle turns through $\frac{1}{5}$ of the circle. What is the measure of the angle?



There are multiple ways to determine an angle's measure.



14. © **MP.5 Use Appropriate Tools** Joanie is making a map of the trails in the community park. Two of the trails start at the same point and form a 40° angle. Use a protractor to draw the angle that Joanie will use on her map.

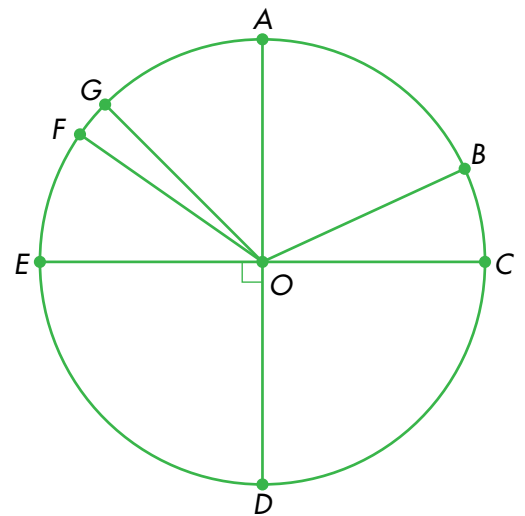
15. **Math and Science** Watts, volts, and amps are used to measure electricity. There is a formula that shows the relationship between watts, volts, and amps. $\text{Volts} \times \text{Amps} = \text{Watts}$. If the volts are 120 and the amps are 5, how many watts are there?

For 16–18, use the figure at the right.

16. © **MP.2 Reasoning** Does the measure of $\angle COA$ equal the measure of $\angle EOD$? What are their measures?

17. Name an acute, an obtuse, and a right angle.

18. **Higher Order Thinking** The measure of $\angle EOF$ is 35° . The measure of $\angle FOB$ is 120° . What is the measure of $\angle BOC$?



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19. Stuart drew 4 angles. Which of Stuart's angles measures 25° ?

