Student Guide

Turning Through Angles

Questions 1–10 (SG pp. 379–383)

1. ∠B, ∠F, ∠A, ∠D, ∠E, ∠C

2. **A.** ∠B and ∠F are acute.

   B. ∠A is obtuse

3. ∠E rotates in the opposite direction of all the other angles.

4. **A.*** White angle has more turning.

   B.* Shaded angle has more turning.

   C.* Shaded angle has more turning.

   D.* Both angles are the same size.

Use the following shaded angles to answer Questions 1–3 below.

1. Write the angles in order from the least turning to the most turning.
2. **A.** Which angles are acute?
   B. Which angles are obtuse?
3. Do all the angles show rotation in the same direction? Explain your thinking.

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An angle that opens up to form a straight line is called a **straight angle.** Angle D is a straight angle made by two rays coming out of point D in opposite directions.

Angles that turn beyond a straight angle (but not all the way around a full circle) are called **reflex angles.**

4. Mrs. Dewey's class used Angle Circles to make angles. For each angle circle, decide which angle, the white angle or the shaded angle, has more turning.

A.   **B.**

C.   **D.**

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*Answers and/or discussion are included in the lesson.

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5. Answers will vary. Possible answers follow:
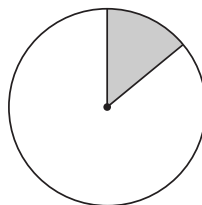
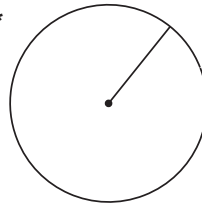**A.***   **B.***
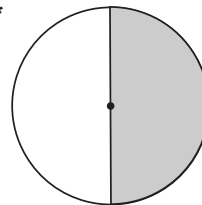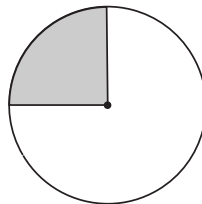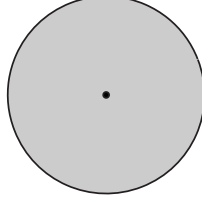
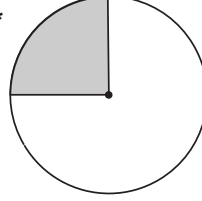**C.***   **D.***
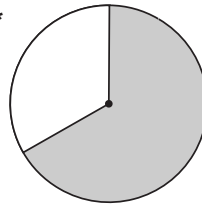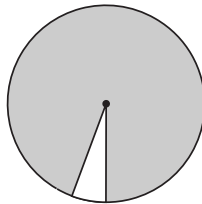
E.*   **F.***

G.*   **H.***

6.* The angles are not the same size. Maya's angle has more rotation.
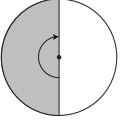
7.* The angles share the same vertex and rays. Added together they make a full rotation around a circle.

*Answers and/or discussion are included in the lesson.
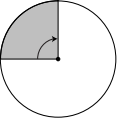
8. 180°

9. 90°

10. 270°

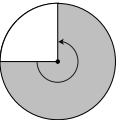Use your calculator if needed to answer Questions 8—10.

8. How many degrees have you turned when you turn halfway around a circle?

9. How many degrees have you turned when you turn one-quarter of the way around a circle?

10. How many degrees have you turned when you turn three-quarters of the way around the circle?

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