

## Activity 18 — Relationship of Angles to the Circle

### Objectives

This activity is designed to help students recognize the relationship of angles to its circle as follows:

- ✓ *The measure of an inscribed angle is equal to half the measure of its intercepted arc.*
- ✓ *The measure of an interior angle is equal to half the sum of the measure of its intercepted arcs.*
- ✓ *The measure of an exterior angle is equal to half the difference of the measures of its intercepted arcs.*

### Vocabulary

circle	angle
inscribed angle	interior angle
exterior angle	arc
intercepted arc	

### Prerequisites

Students must understand how to:

- ✓ *Measure and label segments.*
- ✓ *Measure and label angles.*

### Answers

5. The measure of an inscribed angle is equal to half the measure of the intercepted arc.
7. No.
9. The measure of an inscribed angle is equal to half the measure of its intercepted arc.
14. Answers will vary.
15. The measure of the interior angle is equal to half the sum of the measures of its intercepted arcs.
16. Answers will vary.
17. The measure of the interior angle is equal to half the sum of the measures of its intercepted arcs.
21. Answers will vary.
22. The measure of the exterior angle is equal to half the difference of the measures of its intercepted arcs.