

Angle Relationships Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is the measure of a right angle?

undefined. A) 45 degrees

undefined. B) 90 degrees ✓

undefined. C) 180 degrees

undefined. D) 360 degrees

A right angle measures 90 degrees.

Which of the following are types of angles? (Select all that apply)

undefined. A) Acute ✓

undefined. B) Right ✓

undefined. C) Obtuse ✓

undefined. D) Parallel

Acute, right, and obtuse are types of angles.

Explain the difference between complementary and supplementary angles.

Complementary angles sum to 90 degrees, while supplementary angles sum to 180 degrees.

List the sum of angles in a triangle and a quadrilateral.

1. Sum of angles in a triangle

180 degrees

2. Sum of angles in a quadrilateral

360 degrees

The sum of angles in a triangle is 180 degrees, and in a quadrilateral, it is 360 degrees.

If two angles are complementary and one angle measures 30 degrees, what is the measure of the other angle?

undefined. A) 30 degrees

undefined. B) 60 degrees ✓

undefined. C) 90 degrees

undefined. D) 150 degrees

The other angle measures 60 degrees.

Part 2: Application and Analysis

In a triangle, if two angles measure 45 degrees and 45 degrees, what is the measure of the third angle?

undefined. A) 45 degrees

undefined. B) 60 degrees

undefined. C) 90 degrees ✓

undefined. D) 180 degrees

The third angle measures 90 degrees.

When a transversal crosses two parallel lines, which angle pairs are equal? (Select all that apply)

undefined. A) Correspondingly angles ✓

undefined. B) Alternate interior angles ✓

undefined. C) Alternate exterior angles ✓

undefined. D) Consecutives interior angles

Correspondingly and alternate interior angles are equal.

Given a real-world scenario where a ladder leans against a wall forming an angle with the ground, explain how you would determine the angle between the ladder and the wall if the angle with the ground is known.

You can use the complementary relationship between the angles to find the angle between the ladder and the wall.

If two angles are supplementary and one angle is 120 degrees, what is the relationship of the other angle to a right angle?

undefined. A) It is equal to a right angle.

undefined. B) It is greater than a right angle.

undefined. C) It is less than a right angle. ✓

undefined. D) It is not related to a right angle.

The other angle is less than a right angle.

Analyze the following statements and identify which are true about angles in a parallelogram. (Select all that apply)

undefined. A) Opposite angles are equal. ✓

undefined. B) Consecutive angles are supplementary. ✓

undefined. C) All angles are right angles.

undefined. D) The sum of all angles is 360 degrees. ✓

Opposite angles are equal, and consecutive angles are supplementary.

Part 3: Evaluation and Creation

If a triangle has angles measuring 40 degrees, 60 degrees, and 80 degrees, evaluate whether this triangle can exist.

undefined. A) Yes, it can exist. ✓

undefined. B) No, it cannot exist.

undefined. C) Only if it is an isosceles triangle.

undefined. D) Only if it is a right triangle.

Yes, this triangle can exist as the angles sum to 180 degrees.

Evaluate the following statements about a rectangle and select the correct ones. (Select all that apply)

undefined. A) All angles are right angles. ✓

undefined. **B) Opposite sides are equal. ✓**

undefined. **C) Diagonals bisect each other at right angles. ✓**

undefined. **D) The sum of all angles is 360 degrees. ✓**

All angles are right angles, opposite sides are equal, and the sum of all angles is 360 degrees.

Create a real-world problem involving angle relationships and provide a solution. Describe the scenario, the angle relationships involved, and how you would solve it.

Students should create a scenario involving angles and explain the relationships and solutions.