

Complementary Supplementary Angles Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is the sum of the measures of two complementary angles?

undefined. A) 45 degrees

undefined. B) 90 degrees ✓

undefined. C) 180 degrees

undefined. D) 360 degrees

The sum of two complementary angles is always 90 degrees.

What is the sum of the measures of two supplementary angles?

undefined. A) 45 degrees

undefined. B) 90 degrees

undefined. C) 180 degrees ✓

undefined. D) 360 degrees

The sum of two supplementary angles is always 180 degrees.

Which of the following statements are true about complementary angles?

undefined. A) They always form a right angle. ✓

undefined. B) They can be adjacent or non-adjacent. ✓

undefined. C) Their sum is 180 degrees.

undefined. D) They are used in right triangles. ✓

Complementary angles always sum to 90 degrees and can be adjacent or non-adjacent.

Explain in your own words what makes two angles supplementary.

Two angles are supplementary if their measures add up to 180 degrees.

List two properties of supplementary angles.

1. Property 1

They sum to 180 degrees.

2. Property 2

They can be adjacent or non-adjacent.

Supplementary angles sum to 180 degrees and can be adjacent or non-adjacent.

Part 2: Application and Analysis

If angle A is 40 degrees, what is the measure of its complementary angle?

undefined. A) 40 degrees

undefined. B) 50 degrees ✓

undefined. C) 90 degrees

undefined. D) 140 degrees

The complementary angle is 50 degrees, as it adds up to 90 degrees with angle A.

You have two angles, one measuring x degrees and the other measuring $(90 - x)$ degrees. Which of the following are true?

undefined. A) The angles are complementary. ✓

undefined. B) The angles are supplementary.

undefined. C) The sum of the angles is 90 degrees. ✓

undefined. D) The sum of the angles is 180 degrees.

The angles are complementary, and their sum is 90 degrees.

Given two angles, 70 degrees and 110 degrees, determine if they are complementary, supplementary, or neither. Explain your reasoning.

The angles are supplementary because their sum is 180 degrees.

If two angles form a linear pair and one angle is 75 degrees, what is the measure of the other angle?

undefined. A) 15 degrees

undefined. B) 75 degrees

undefined. C) 105 degrees ✓

undefined. D) 180 degrees

The other angle measures 105 degrees, as they sum to 180 degrees.

Analyze the following pairs of angles and determine which are complementary:

undefined. A) 30 degrees and 60 degrees ✓

undefined. B) 45 degrees and 45 degrees ✓

undefined. C) 90 degrees and 90 degrees

undefined. D) 120 degrees and 60 degrees

The pairs that are complementary sum to 90 degrees.

Explain how you can determine if two angles are supplementary using a geometric diagram.

Two angles are supplementary if they form a straight line, summing to 180 degrees.

Part 3: Evaluation and Creation

Two angles are complementary, and one angle is three times the other. What is the measure of the smaller angle?

undefined. A) 15 degrees

undefined. B) 22.5 degrees ✓

undefined. C) 30 degrees

undefined. D) 45 degrees

The smaller angle measures 22.5 degrees.

Evaluate the following statements and select those that are true for supplementary angles:

undefined. A) They always form a straight line. ✓

undefined. B) They can be adjacent or non-adjacent. ✓

undefined. C) Their sum is always 90 degrees.

undefined. D) They are always used in triangles.

Supplementary angles always sum to 180 degrees and can be adjacent or non-adjacent.

Create a real-world problem involving supplementary angles and provide a solution.

A real-world problem could involve two angles in a building that sum to 180 degrees.

Design a geometric figure that includes at least one pair of complementary angles and one pair of supplementary angles. Describe the figure and the angles involved.

1. Complementary Angles

In a right triangle, the two non-right angles.

2. Supplementary Angles

Angles on a straight line.

A figure could be a right triangle with complementary angles and a straight line with supplementary angles.