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Worksheet Complementary And Supplementary Angles Questions and Answers PDF

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Part 1: Building a Foundation

What is the sum of two complementary angles?

Hint: Think about the definition of complementary angles.

○ A) 45 degrees
○ **B) 90 degrees ✓**
○ C) 180 degrees
○ D) 360 degrees

| The sum of two complementary angles is always 90 degrees.

What is the sum of two supplementary angles?

Hint: Consider the definition of supplementary angles.

○ A) 45 degrees
○ B) 90 degrees
○ **C) 180 degrees ✓**
○ D) 360 degrees

| The sum of two supplementary angles is always 180 degrees.

Which of the following statements are true about complementary angles? (Select all that apply)

Hint: Think about the properties of complementary angles.

☐ A) They always add up to 180 degrees.
☐ **B) They can be adjacent. ✓**
☐ C) They always form a linear pair.
☐ **D) They add up to 90 degrees. ✓**

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Complementary angles add up to 90 degrees and can be adjacent.

Explain in your own words what it means for two angles to be supplementary.

Hint: Consider the definition and properties of supplementary angles.

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

Provide the complement and supplement of a 30-degree angle.

Hint: Use the definitions of complement and supplement.

1. Complement of 30 degrees

60 degrees

2. Supplement of 30 degrees

150 degrees

The complement of a 30-degree angle is 60 degrees, and the supplement is 150 degrees.

Part 2: Understanding and Application

If angle A is 60 degrees, what is the measure of its complement?

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Hint: Remember that complementary angles add up to 90 degrees.

⚪ **A) 30 degrees ✓**
⚪ B) 60 degrees
⚪ C) 120 degrees
⚪ D) 90 degrees

| The complement of angle A is 30 degrees.

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

Hint: Consider the definition of supplementary angles.

☐ A) 90 degrees and 90 degrees
☐ **B) 45 degrees and 135 degrees ✓**
☐ **C) 60 degrees and 120 degrees ✓**
☐ **D) 100 degrees and 80 degrees ✓**

| Pairs that add up to 180 degrees are supplementary.

Describe a real-world scenario where you might encounter complementary angles.

Hint: Think about everyday objects or situations.

| **Complementary angles can be found in various real-world contexts, such as in the design of furniture or architecture.**

You have a right triangle with one angle measuring 40 degrees. What is the measure of the other non-right angle?

Hint: Remember that the angles in a triangle add up to 180 degrees.

⚪ A) 40 degrees
⚪ **B) 50 degrees ✓**
⚪ C) 60 degrees
⚪ D) 90 degrees

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The other non-right angle measures 50 degrees.

Given an angle of 75 degrees, calculate both its complement and supplement.

Hint: Use the definitions of complement and supplement.

The complement of 75 degrees is 15 degrees, and the supplement is 105 degrees.

Part 3: Analysis, Evaluation, and Creation

If two angles are both supplements and complements of each other, what are their measures?

Hint: Consider the definitions of supplementary and complementary angles.

○ A) 45 degrees each
○ **B) 90 degrees each ✓**
○ C) 180 degrees each
○ D) 0 degrees each

The only angles that are both supplements and complements of each other are 90 degrees each.

Which of the following statements correctly describe the relationship between complementary and supplementary angles? (Select all that apply)

Hint: Think about the definitions and properties of both types of angles.

☐ A) All complementary angles are also supplementary.
☐ B) All supplementary angles are also complementary.
☐ **C) Complementary angles add up to less than supplementary angles. ✓**
☐ **D) Supplementary angles can form a straight line. ✓**

Complementary angles add up to 90 degrees, while supplementary angles add up to 180 degrees.

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Analyze the relationship between complementary and supplementary angles in the context of a geometric figure, such as a triangle or quadrilateral.

Hint: Consider how angles interact in different shapes.

In a triangle, the sum of angles is 180 degrees, while in a quadrilateral, the sum is 360 degrees, illustrating the relationship between complementary and supplementary angles.

Which of the following scenarios correctly uses the concept of supplementary angles?

Hint: Think about practical applications of supplementary angles.

○ A) Designing a corner shelf
○ B) Calculating the height of a building using a shadow
○ **C) Creating a 180-degree turn in a road ✓**
○ D) Building a triangular roof

Creating a 180-degree turn in a road is a correct use of supplementary angles.

Create a real-world problem involving complementary and supplementary angles, and provide a solution to your problem.

Hint: Think about everyday situations where angles are relevant.

An example could be designing a ramp where the angle of elevation is 30 degrees; the complementary angle would be 60 degrees, and the supplementary angle would be 150 degrees.

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