

## Angle Pair Relationships Worksheet Answer Key PDF

Angle Pair Relationships Worksheet Answer Key PDF

*Disclaimer: The angle pair relationships worksheet answer key pdf was generated with the help of StudyBlaze AI. Please be aware that AI can make mistakes. Please consult your teacher if you're unsure about your solution or think there might have been a mistake. Or reach out directly to the StudyBlaze team at [max@studyblaze.io](mailto:max@studyblaze.io).*

### Part 1: Building a Foundation

---

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

**undefined. 90 degrees ✓**

undefined. 180 degrees

undefined. 360 degrees

undefined. 45 degrees

The sum of two complementary angles is always 90 degrees.

**Which of the following are properties of vertical angles?**

undefined. They are adjacent.

**undefined. They are congruent. ✓**

undefined. They form a linear pair.

**undefined. They are opposite each other when two lines intersect. ✓**

Vertical angles are always congruent and opposite each other.

**Explain the difference between supplementary and complementary angles.**

**Supplementary angles sum to 180 degrees, while complementary angles sum to 90 degrees.**

**List the types of angle pairs that can be formed when two lines intersect.**

1. What are vertical angles?

**Angles that are opposite each other when two lines intersect.**

2. What are adjacent angles?

**Angles that share a common vertex and side.**

3. What are linear pairs?

**Two adjacent angles that form a straight line.**

Types of angle pairs include vertical angles, adjacent angles, and linear pairs.

## Part 2: Comprehension and Application

---

**If two angles form a linear pair, what is their relationship?**

undefined. They are complementary.

**undefined. They are supplementary. ✓**

undefined. They are vertical angles.

undefined. They are adjacent but not supplementary.

Angles in a linear pair are always supplementary.

**Which of the following statements are true about adjacent angles?**

undefined. They always form a linear pair.

**undefined. They share a common vertex. ✓**

**undefined. They do not overlap. ✓**

undefined. They are always equal.

Adjacent angles share a common vertex, do not overlap, but do not always form a linear pair.

**Describe how you can identify complementary angles in a geometric figure.**

**Complementary angles can be identified by checking if their measures add up to 90 degrees.**

**Two angles are supplementary. If one angle measures 65 degrees, what is the measure of the other angle?**

undefined. 25 degrees

**undefined. 115 degrees ✓**

undefined. 135 degrees

undefined. 95 degrees

The other angle measures 115 degrees.

**Using algebra, solve for  $x$  if two angles are complementary and one angle is represented as  $(2x + 10)$  degrees and the other as  $(3x - 20)$  degrees.**

**Set up the equation  $(2x + 10) + (3x - 20) = 90$  and solve for  $x$ .**

### Part 3: Analysis, Evaluation, and Creation

---

**In a geometric figure, two lines intersect creating four angles. If one angle measures 70 degrees, what is the measure of its vertical angle?**

undefined. 110 degrees

**undefined. 70 degrees ✓**

undefined. 140 degrees

undefined. 90 degrees

The measure of the vertical angle is also 70 degrees.

**Which of the following pairs of angles are always supplementary?**

undefined. Vertical angles

**undefined. Angles in a linear pair ✓**

undefined. Adjacent angles

undefined. Complementary angles

Angles in a linear pair are always supplementary.

**Analyze the relationship between adjacent angles and linear pairs. How do they differ and how are they similar?**

**Adjacent angles share a common vertex and side, while linear pairs are adjacent angles that sum to 180 degrees.**

**Which scenario best demonstrates the use of complementary angles in real life?**

**undefined. DesignING a rectangular garden ✓**

undefined. ConstructING a right-angled triangle

undefined. Building a circular fountain

undefined. Laying out a straight road

Designs involving right angles often utilize complementary angles.

**Evaluate the following statements and identify which are correct regarding angle pair relationships:**

undefined. All adjacent angles are supplementary.

**undefined. Vertical angles are always equal. ✓**

**undefined. Complementary angles can be adjacent or non-adjacent. ✓**

**undefined. Linear pairs always sum to 180 degrees. ✓**

Vertical angles are always equal, and linear pairs sum to 180 degrees.

**Create a real-world problem involving supplementary angles and provide a solution. Include a diagram to illustrate your problem.**

**Create a problem involving two angles that sum to 180 degrees, and provide a clear solution.**