1. What does Theorem 6.1 state about two intersecting lines?
   A. The sum of adjacent angles is 180°
   B. Vertically opposite angles are equal
   C. Angles on a straight line are supplementary
   D. None of the above (B)

Explanation: Theorem 6.1 states that when two lines intersect, the vertically opposite angles are always equal

2. In the figure, if the ratio of ∠POR to ∠ROQ is 5:7, what is the measure of each angle?
   A. 45° and 63°
   B. 50° and 60°
   C. 40° and 50°
   D. 30° and 60° (A)

Explanation: Given the ratio of ∠POR: ∠ROQ 5: 7, the total angle is 180°. By solving for the angles, we find that ∠POR = 45° and (\angle ROQ = 63°

3. What are vertically opposite angles?
   A. Two angles on the same side of the transversal
   B. Two angles that add up to 180°
   C. Two angles formed by two intersecting lines that are equal
   D. None of the above (C)

Explanation: Vertically opposite angles are formed when two lines intersect, and these angles are always equal

4. What is the relationship between adjacent angles on a straight line?
   A. They are complementary
   B. They are supplementary
   C. They are congruent
   D. None of the above (B)

Explanation: Adjacent angles on a straight line always add up to 180°, so they are supplementary

5. In the given figure (Example 1), lines PQ and RS intersect at point O, with ∠POR: ∠ROQ 5:7, what is the total sum of all angles around point O?
   A. 360° B. 180°
   C. 90° D. 270° (A)

Explanation : The sum of all angles around a point is always 360°, as the angles together form a full rotation

6. If ray OR bisects ∠POS and ray OT bisects ∠SOQ, what is the measure of ∠ROT in Example 2?
   A. 90°
   B. 45°
   C. 50°
   D. 60° (B)

Explanation: : Since ray OR bisects ∠POS and ray OT bisects ∠SOQ, ∠ROT is half of the total of ∠POR and ∠ROQ. Hence, (\angle ROT = 45°

7. What is the sum of all angles formed by four rays meeting at point O, as in Example 3?
   A. 180°
   B. 360°
   C. 90°
   D. 270° (B)

Explanation: The sum of all angles formed around any point is always 360°. This is a fundamental property of
Geometry

8. If ∠ROQ = 63°, what is the measure of ∠POR if they are vertically opposite angles?
   A. 63°
   B. 180°
   C. 90°
   D. 72 (A)

Explanation: Vertically opposite angles are always equal, so ∠POR will also be 63° if ∠ROQ is 63

9. Which of the following is the correct relationship for complementary angles?
   A. The sum is 90°
   B. The sum is 180°
   C. The sum is 360°
   D. The sum is 45° (A)

Explanation: Complementary angles are two angles whose sum is always 90°

10. What is the measure of a right angle?
    A. 90°
    B. 60°
    C. 180°
    D. 120° (A)

Explanation: A right angle is defined as an angle that measures exactly 90°, which is one-quarter of a full rotation