

CHAPTER-6 | Lines and Angles

QUIZ PART-06

1. If $PQ \parallel RS$ and angle $MXQ = 135^\circ$, and angle $MYR = 40^\circ$, what is $\angle XMY$?

- A. 45° B. 55°
C. 60° D. 65° (C)

Explanation: Using the properties of parallel lines and angles formed by a transversal, $\angle XMY$ is calculated by the relationship between the given angles.

2. If a transversal intersects two lines such that the bisectors of a pair of corresponding angles are parallel, what can be concluded?

- A. The two lines are perpendicular
B. The two lines are parallel
C. The transversal is vertical
D. The two lines are skew lines (B)

Explanation: If the bisectors of corresponding angles are parallel, the lines intersected by the transversal are parallel to each other

3. In the figure, $AB \parallel CD$ and $CD \parallel EF$. Also, $EA \perp AB$. If angle $BEF = 55^\circ$ what is the value of x ?

- A. 45° B. 55°
C. 65° D. 75° (A)

Explanation: By using the properties of parallel lines and angles, we deduce that $x = 45^\circ$ based on the angle relationships in the figure

4. If $PQ \parallel RS$, and angle $MXQ = 135^\circ$, and angle $MYR = 40^\circ$, find the value of $\angle XMY$.

- A. 60° B. 70°
C. 80° D. 90° (A)

Explanation: Applying the angle sum property of the angles formed by the transversal, we calculate $\angle XMY$ as 60°

5. If two lines are cut by a transversal such that corresponding angles are equal, what can be concluded?

- A. The lines are parallel
B. The lines are perpendicular
C. The lines are skew lines
D. The lines are parallel only if alternate angles are also equal (A)

Explanation: If corresponding angles are equal, the lines intersected by the transversal are parallel, as per the properties of parallel lines and transversals.

6. Which of the following is true if a transversal intersects two parallel lines?

- A. Alternate interior angles are equal
B. Corresponding angles are unequal
C. Consecutive interior angles are greater than 180°
D. Exterior angles are always equal (A)

Explanation: If a transversal intersects two parallel lines, alternate interior angles are equal, which is a property of parallel lines

7. If a transversal intersects two lines such that the sum of consecutive interior angles is 180° , what can be concluded?

- A. The lines are perpendicular
B. The lines are parallel
C. The transversal is vertical
D. The angles are acute (B)

Explanation: The sum of consecutive interior angles being 180° indicates that the two lines are parallel

Q8. What does Theorem 6.2 state?

- A. Lines parallel to a common line are parallel to each other
B. Lines parallel to a common line are perpendicular to each other
C. Lines parallel to a common line are skew lines
D. None of the above (A)

Explanation: Theorem 6.2 states that if two lines are parallel to a common line, they are parallel to each other.

9. In the figure, if $AB \parallel CD$ and $CD \parallel EF$, and $EA \perp AB$, what is the value of y ?

- A. 45° B. 55°
C. 65° D. 75° (C)

Explanation: Using the properties of parallel lines and the perpendicular transversal, we determine that $y = 65^\circ$.

10. If two lines are parallel to a common line, what can be concluded?

- A. The lines are perpendicular
B. The lines are parallel to each other
C. The lines intersect at a right angle
D. The lines are skew lines

Answer: B

Explanation: If two lines are parallel to a common line, they will also be parallel to each other, as per the transitive property of parallel lines.