CHAPTER-6 | Lines and Angles

QUIZ PART-07

1. In the figure, if AB || CD, CD || EF and y: z = 3/7 what is the value of x?

A. 7 B. 9
C. 12 D. 15 (B)

Explanation: The relationship between the ∠s and corresponding segments can be used to solve for x by applying the property of parallel lines and proportional segments.

2. If AB || CD, EF 1 CD, and ∠ GED = 126 °, what is ∠ AGE, GEF, and FGE?

A. ∠ AGE = 54° , *angle* GEF = 90° , ∠ FGE = 90 °
B. ∠ AGE = 60° , ∠ FGE = 54° ∠ GEF = 66 ° ,
C. ∠ AGE = 54° , ∠ FGE = 60° ∠ GEF = 66 ° ,
D. ∠ AGE = 60° , ∠ GEF = 54° , ∠ FGE = 66 ° (C)

Explanation: By using the ∠ relationships between parallel lines and perpendicular transversals, we can calculate the three required ∠s

Q3. In the figure, if PQ || ST, ∠ PQR = 110° and ∠ RST = 130° , what is <QRS?

A. 90° B. 100°
C. 110° D. 120° (A)

Explanation: The sum of adjacent ∠s on the same side of the transversal is 180°. Hence, QRS is calculated by subtracting PQR and RST from

Q4. In the given figure, if AB || CD and the ratio of y / z = 3/7 what is x?

A. 10 B. 12
C. 15 D. 18 (B)

Explanation: Using the concept of parallel lines and the proportionality of the segments, we can calculate the value of x.

5. If a transversal intersects two parallel lines, what can be concluded about corresponding ∠s?

A. They are complementary
B. They are supplementary
C. They are equal
D. They are unequal (C)

Explanation: If a transversal intersects two parallel lines, corresponding ∠s are equal according to the properties of parallel lines.

6. In the figure, if AB || CD, and EF 1 CD, and GED = 126°, what is the measure of <AGE?

A. 54° B. 60°
C. 66° D. 72° (A)

Explanation: Using the ∠ sum property and the relationships between perpendicular and parallel lines, <AGE is calculated as 54°,

7. If PQ || ST and PQR = 110°, what is the relationship between <QRS and <RST?

A. <QRS + RST = 180° B. QRS + RST = 90°
B. C. QRS = <RST D. QRS = 0° (A)

Explanation: Since PQ || ST, the sum of consecutive interior ∠s (2QRS and RST) must be 180°.

8. 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.

8. What can be concluded if a transversal intersects two lines such that corresponding ∠s are equal?

A. The lines are perpendicular
B. The lines are parallel
C. The lines are skew
D. The lines are intersecting (B)

Explanation: If a transversal intersects two lines such that corresponding ∠s are equal, the two lines must be parallel according to the properties of parallel lines and transversals.

Q9. If AB || CD and EF 1 CD, and GED = 126°, what is <GEF?

A. 54° B. 60°
C. 66° D. 90° (A)

Explanation: Since EF is perpendicular to CD, GEF is a right ∠, which is 90°.

10. If two lines are parallel and cut by a transversal, what is the relationship between alternate ∠s?

A. They are complementary
B. They are supplementary
C. They are equal
D. They are unequal (C)

Explanation: Alternate ∠s formed by a transversal cutting two parallel lines are always equal, as per the properties of parallel lines.