Chapter 5

Indicate the best answer by writing the appropriate letter.

1. Both pairs of opposite sides of a quadrilateral are parallel. Which special kind of quadrilateral *must* it be?
   a. parallelogram **b.** rectangle **c.** rhombus **d.** trapezoid

2. The diagonals of a certain quadrilateral are congruent. Which term could *not* be used to describe the quadrilateral?
   a. isosceles trapezoid **b.** rectangle
   c. rhombus **d.** parallelogram with a 60° angle

3. M is the midpoint of hypotenuse $\overline{TK}$ of right $\triangle TAK$. $AM = 13$. What is the length of $\overline{TK}$?
   a. 26 **b.** $19\frac{1}{2}$ **c.** 13 **d.** none of these

4. In $\square WXYZ$, $WX = 10$. What does ZW equal?
   a. 16 **b.** YZ **c.** WY **d.** none of these

5. A diagonal of a parallelogram bisects one of its angles. Which special kind of parallelogram *must* it be?
   a. rectangle **b.** rhombus
   c. square **d.** parallelogram with a 60° angle

6. The lengths of the bases of a trapezoid are 18 and 26. What is the length of the median?
   a. 8 **b.** 22 **c.** 44 **d.** 34

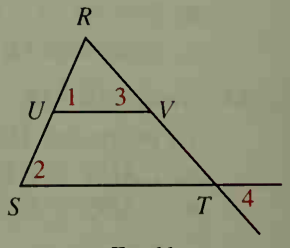
7. In quad. $PQRS$, $PQ = SR$, $QR = PS$, and $m\angle P = m\angle Q$. Which of the following is *not necessarily* true?
   a. $\overline{PR} \perp \overline{QS}$ **b.** $\overline{PR} \cong \overline{QS}$ **c.** $\angle P \cong \angle R$ **d.** $\angle R \cong \angle S$

8. In $\triangle ABC$, $AB = 8$, $BC = 10$, and $AC = 12$. M is the midpoint of $\overline{AB}$, and N is the midpoint of $\overline{BC}$. What is the length of $\overline{MN}$?
   a. 4 **b.** 5 **c.** 6 **d.** 9

9. If $EFGH$ is a parallelogram, which of the following *must* be true?
   a. $\angle E \cong \angle F$ **b.** $\angle F \cong \angle H$
   c. $\overline{FG} \parallel \overline{GH}$ **d.** $m\angle E + m\angle G = 180$

10. Which information does *not* prove that quad. $ABCD$ is a parallelogram?
    a. $\overline{AC}$ and $\overline{BD}$ bisect each other. **b.** $\overline{AD} \parallel \overline{BC}$; $\overline{AD} \cong \overline{BC}$
    c. $\overline{AB} \parallel \overline{CD}$; $\overline{AD} \cong \overline{BC}$ **d.** $\angle A \cong \angle C$; $\angle B \cong \angle D$

11. In the figure, $\overline{RU} \cong \overline{US}$ and $\angle 1 \cong \angle 2$. Which of the following *cannot* be proved?
    a. $\angle 3 \cong \angle 4$ **b.** $\overline{RV} \cong \overline{VT}$
    c. $\overline{US} \cong \overline{VT}$ **d.** $ST = 2 \cdot UV$



Ex. 11

12. Which of the following *must* be true for any trapezoid?
    a. Any two consecutive angles are supplementary.
    b. At least one angle is obtuse.
    c. The diagonals bisect each other.
    d. The median bisects each base.