OMIT

34) The length of a side of a rhombus whose diagonals are 6 and 8 is

A) 9 B) 8 C) 5 D) 6

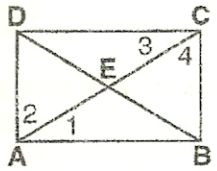
35) In rhombus ABCD, $AB = 2x - 2$ and $BC = x + 8$. Find the length of $\overline{BC}$.

$2x - 2 = x + 8$

$x = 10$

$BC = 18$

36) In the diagram below, ABCD is a rectangle with diagonals $\overline{AC}$ and $\overline{BD}$.



If $m\angle 1 = (3x + 14)°$ and $m\angle 4 = (2x - 9)°$, find the value of x.

$3x + 14 + 2x - 9 = 90$

$5x + 5 = 90$

$5x = 85$

$x = 17$

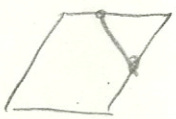
37) Which statement about a figure ABCD would *always* be true?

A) If ABCD is a quadrilateral, then it must be a parallelogram.
B) If ABCD is a parallelogram, then it must be a quadrilateral.
C) If ABCD is a parallelogram, then it must be a trapezoid.
D) If ABCD is a rectangle, then it must be a square.

38) Which statement is *always* true?

A) The diagonals of a parallelogram bisect each other.
B) The diagonals of a parallelogram bisect the angles of the parallelogram.
C) The diagonals of a parallelogram are congruent.
D) The diagonals of a parallelogram are perpendicular.

39) If the midpoints of two consecutive sides of a rhombus are joined, the triangle formed must be



A) isosceles C) acute
B) right D) equilateral

40) Which figure does *not always* have congruent diagonals?

A) square C) rhombus
B) isosceles trapezoid D) rectangle

41) Which quadrilateral must have congruent diagonals?

A) parallelogram C) trapezoid
B) rhombus D) rectangle

42) Which statement is *always* true?

A) Squares are rectangles.
B) Rectangles are squares.
C) Rhombuses are squares.
D) Parallelograms are rectangles.

43) Which statement is *always* true?

A) All rhombuses are rectangles.
B) All parallelograms are rectangles.
C) All trapezoids are parallelograms.
D) All squares are rhombuses.

44) A quadrilateral has diagonals that are congruent but *not* perpendicular. The quadrilateral contains no right angles. The quadrilateral could be

A) a rhombus
B) an isosceles trapezoid
C) a rectangle
D) a square

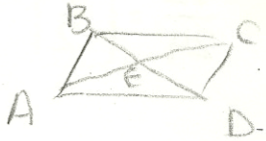
45) Which statement is *not* true for any given parallelogram ABCD?

A) $\overline{AB} \cong \overline{DC}$
B) $\overline{AC} \perp \overline{DB}$
C) $m\angle B + m\angle C = 180°$
D) $\angle A \cong \angle C$

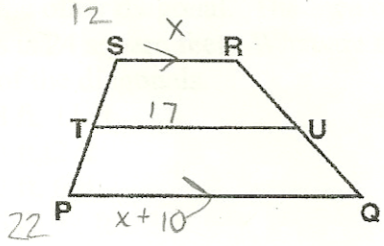
Wording?

46) In parallelogram ABCD, diagonals $\overline{AC}$ and $\overline{DB}$ intersect at E. Which statement is *always* true?

A) Triangle ABC is congruent to triangle CDA.
B) Triangle AEB is congruent to triangle AED.
C) Triangle AED is isosceles.
D) Triangle ABD is a right triangle.



47) In the diagram below, PQRS is a trapezoid with $\overline{SR} \parallel \overline{PQ}$. $\overline{TU}$ is the median.



If $SR = x$, $PQ = x + 10$, and $TU = 17$, what is the value of x?

A) 11 C) 12
B) 3.5 D) 22

$\frac{x + x + 10}{2} = 17$

$2x + 10 = 34$

$2x = 24$

$x = 12$