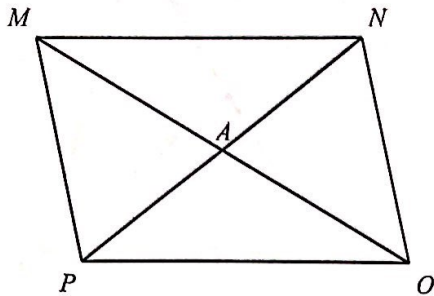


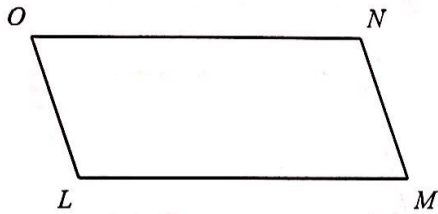
Quadrilaterals Review Sheet

1. Find AM in the parallelogram if $PN=15$ and $AO=5$. The diagram is not to scale.



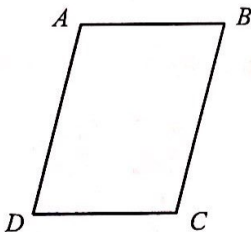
- A. 10 B. 5 C. 15 D. 7.5

2. $LMNO$ is a parallelogram. If $NM = x + 24$ and $OL = 5x + 8$, find the value of x and then find NM and OL .



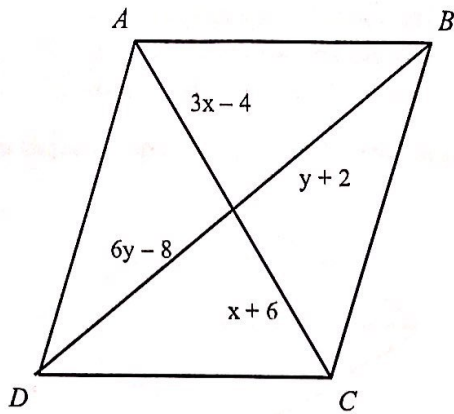
- A. $x = 6, NM = 30, OL = 30$ C. $x = 6, NM = 28, OL = 30$
 B. $x = 4, NM = 30, OL = 28$ D. $x = 4, NM = 28, OL = 28$

3. If $m\angle B = m\angle D = 46$, find $m\angle C$ so that quadrilateral $ABCD$ is a parallelogram. The diagram is not to scale.



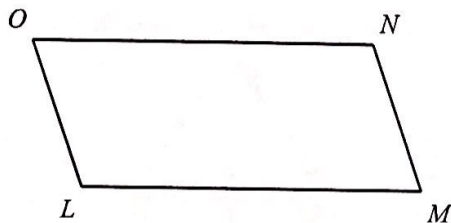
- A. 134 B. 92 C. 46 D. 268

4. Find values of x and y for which $ABCD$ must be a parallelogram. The diagram is not to scale.



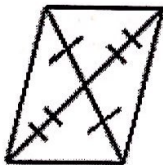
- A. $x = 5, y = 4$ B. $x = 5, y = 11$ C. $x = 5, y = 2$ D. $x = 2, y = 5$

5. If $ON = 5x - 7$, $LM = 4x + 8$, $NM = x - 6$, and $OL = 5y - 5$, find the values of x and y for which $LMNO$ must be a parallelogram. The diagram is not to scale.



- A. $x = 9, y = \frac{5}{14}$ C. $x = 15, y = \frac{14}{5}$
 B. $x = 9, y = \frac{14}{5}$ D. $x = 15, y = \frac{5}{14}$

6. Based on the information in the diagram, can you prove that the figure is a parallelogram? Explain.



- A. Yes; the diagonals are congruent.
 B. Yes; the diagonals bisect each other.
 C. Yes; two opposite sides are both parallel and congruent.
 D. No; you cannot prove that the quadrilateral is a parallelogram.

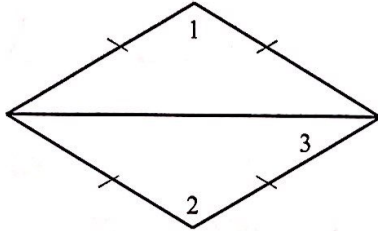
7. Which description does NOT guarantee that a quadrilateral is a rectangle?

- A. a parallelogram with congruent sides
 B. a quadrilateral with all congruent angles
 C. a quadrilateral with all four angles right
 D. a quadrilateral with diagonals that are congruent and bisect each other

8. Which statement is true?

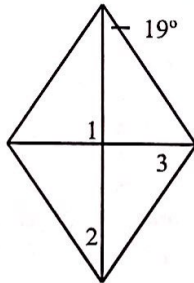
- A. All quadrilaterals are squares.
- B. All rectangles are parallelograms.
- C. All quadrilaterals are rectangles.
- D. All parallelograms are rectangles.

9. In the rhombus, $m\angle 1 = 170$. What are $m\angle 2$ and $m\angle 3$? The diagram is not to scale.



- A. $m\angle 2 = 170, m\angle 3 = 85$
- B. $m\angle 2 = 10, m\angle 3 = 5$
- C. $m\angle 2 = 170, m\angle 3 = 5$
- D. $m\angle 2 = 10, m\angle 3 = 85$

10. Find the measure of the numbered angles in the rhombus. The diagram is not to scale.

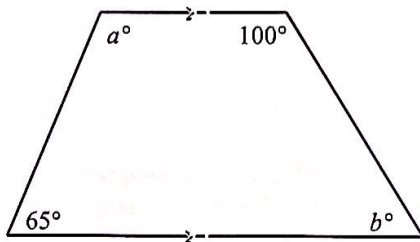


- A. $m\angle 1 = 90, m\angle 2 = 19, \text{ and } m\angle 3 = 19$
- B. $m\angle 1 = 90, m\angle 2 = 19, \text{ and } m\angle 3 = 80.5$
- C. $m\angle 1 = 90, m\angle 2 = 19, \text{ and } m\angle 3 = 71$
- D. $m\angle 1 = 90, m\angle 2 = 71, \text{ and } m\angle 3 = 19$

11. $DEFG$ is a rectangle. $DF = 2x - 4$ and $EG = x + 8$. Find the value of x and the length of each diagonal.

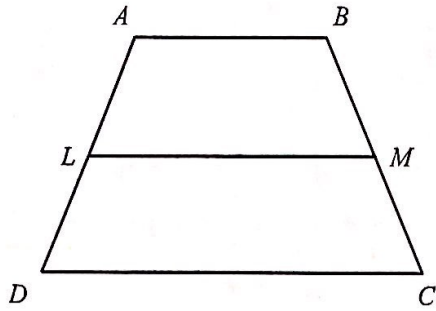
- A. $x = 6, DF = 14, EG = 14$
- B. $x = 12, DF = 14, EG = 14$
- C. $x = 12, DF = 20, EG = 24$
- D. $x = 12, DF = 20, EG = 20$

12. Find the values of a and b . The diagram is not to scale.



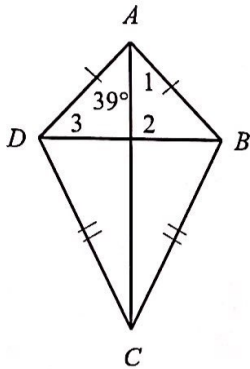
- A. $a = 115, b = 65$
- B. $a = 115, b = 80$
- C. $a = 100, b = 65$
- D. $a = 100, b = 80$

13. \overline{LM} is the midsegment of $\square ABCD$. $AB = x + 8$, $LM = 4x + 3$, and $DC = 173$. What is the value of x ?



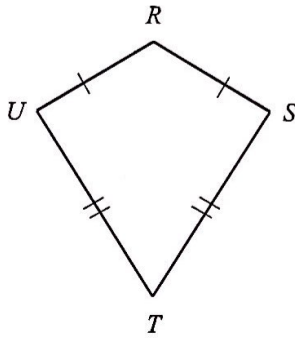
- A. 206 B. 33 C. 25 D. 29

14. Find $m\angle 1$ and $m\angle 3$ in the kite. The diagram is not to scale.



- A. $m\angle 1 = 51, m\angle 3 = 39$ C. $m\angle 1 = 39, m\angle 3 = 39$
 B. $m\angle 1 = 51, m\angle 3 = 51$ D. $m\angle 1 = 39, m\angle 3 = 51$

15. $m\angle R = 140$ and $m\angle S = 80$. Find $m\angle T$. The diagram is not to scale.



- A. 60 B. 30 C. 80 D. 70

16. Verify that parallelogram $ABCD$ with vertices $A(-5, -1)$, $B(-9, 6)$, $C(-1, 5)$, and $D(3, -2)$ is a rhombus by showing that it is a parallelogram with perpendicular diagonals.

