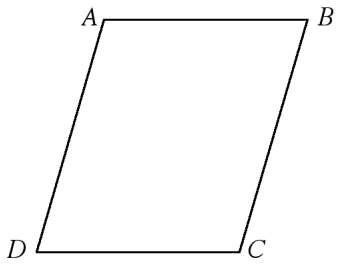
**Name:** _____ **Class:** _____ **Date:** _____ **ID: A**

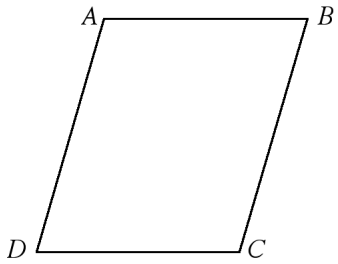
# Geometry Unit 7 Test

## Short Answer

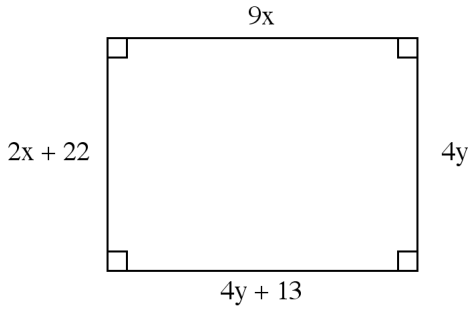
1. *ABCD* is a parallelogram. If $m\angle CDA = 70$, then $m\angle BCD =$ __?__. The diagram is not to scale.



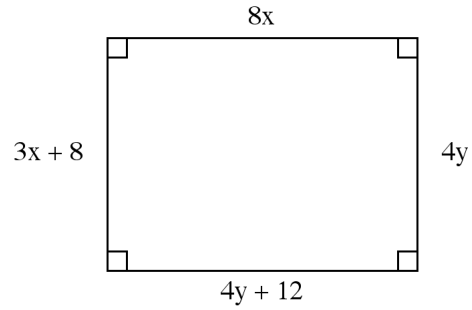

2. *ABCD* is a parallelogram. If $m\angle CDA = 88$, then $m\angle DAB =$ __?__. The diagram is not to scale.




3. Find the values of the variables and the lengths of the sides of this rectangle. The diagram is not to scale.




4. Find the values of the variables and the lengths of the sides of this rectangle. The diagram is not to scale.

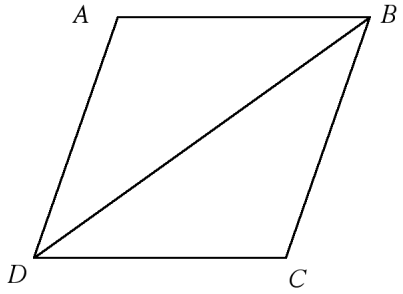


5. What is the most precise name for quadrilateral *ABCD* with vertices *A*(–4, 1), B(–2, 5), C(5, 5), and *D*(3, 1)?

6. What is the most precise name for quadrilateral *ABCD* with vertices *A*(–4, 1), B(–2, 3), C(4, 3), and *D*(2, 1)?

7. What is the missing reason in the proof?

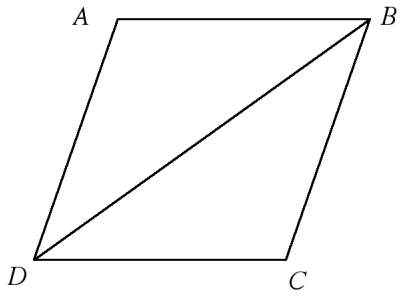
   **Given:** parallelogram *ABCD* with diagonal $\overline{BD}$
   **Prove:** $\Delta ABD \cong \Delta CDB$




| Statements | Reasons |
|---|---|
| 1. $\overline{AD} \parallel \overline{BC}$ | 1. Definition of parallelogram |
| 2. $\angle ADB \cong \angle CBD$ | 2. Alternate Interior Angles Theorem |
| 3. $\overline{AB} \parallel \overline{CD}$ | 3. Definition of parallelogram |
| 4. $\angle ABD \cong \angle CDB$ | 4. Alternate Interior Angles Theorem |
| 5. $\overline{DB} \cong \overline{DB}$ | 5. Reflexive Property of Congruence |
| 6. $\Delta ABD \cong \Delta CDB$ | 6. ? |

8. What is the missing reason in the proof?

**Given:** parallelogram $ABCD$ with diagonal $\overline{BD}$
**Prove:** $\Delta ABD \cong \Delta CDB$




| Statements | Reasons |
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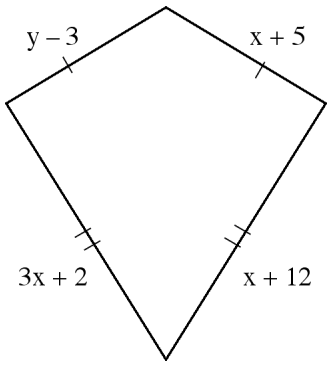
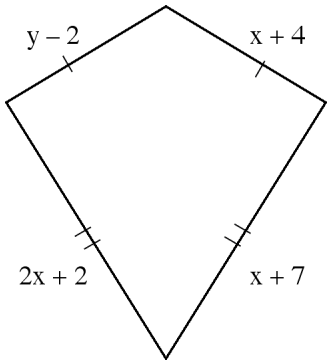
| 1. $\overline{AD} \parallel \overline{BC}$ | 1. Definition of parallelogram |
| 2. $\angle ADB \cong \angle CBD$ | 2. Alternate Interior Angles Theorem |
| 3. $\overline{AB} \parallel \overline{CD}$ | 3. Definition of parallelogram |
| 4. $\angle ABD \cong \angle CDB$ | 4. ? |
| 5. $\overline{DB} \cong \overline{DB}$ | 5. Reflexive Property of Congruence |
| 6. $\Delta ABD \cong \Delta CDB$ | 6. ASA |

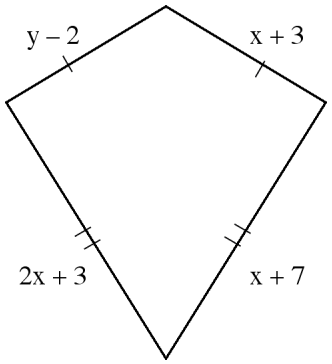
9. Find the values of the variables and the lengths of the sides of this kite.



10. Find the values of the variables and the lengths of the sides of this kite.



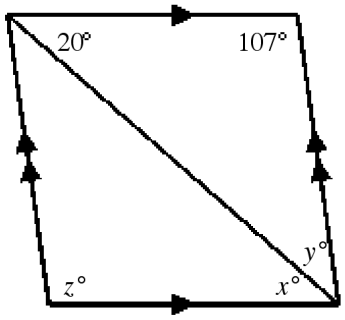

11. Find the values of the variables and the lengths of the sides of this kite.



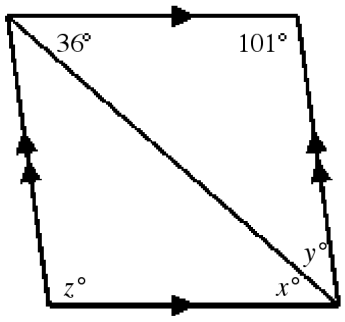

12. For $A(-1,-4)$, $B(-2,0)$, and $C(1,-4)$, find all locations of a fourth point, $D$, so that a parallelogram is formed using $A, B, C, D$ in any order as vertices. Plot each point $D$ on a coordinate grid and draw the parallelogram.

13. For $A(-1,1)$, $B(2,6)$, and $C(2,1)$, find all locations of a fourth point, $D$, so that a parallelogram is formed using $A, B, C, D$ in any order as vertices. Plot each point $D$ on a coordinate grid and draw the parallelogram.

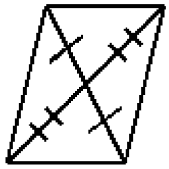
14. Find the values of the variables in the parallelogram. The diagram is not to scale.



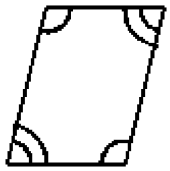
15. Find the values of the variables in the parallelogram. The diagram is not to scale.



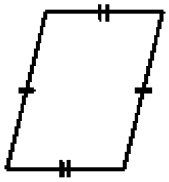

16. Based on the information in the diagram, can you prove that the figure is a parallelogram? Explain.



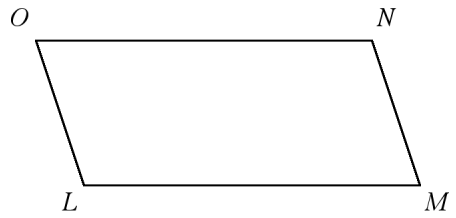
17. Based on the information in the diagram, can you prove that the figure is a parallelogram? Explain.



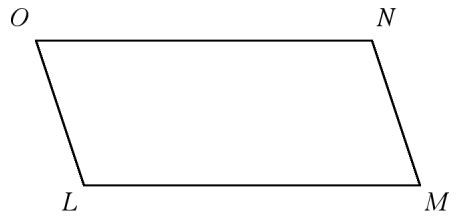
18. Based on the information in the diagram, can you prove that the figure is a parallelogram? Explain.



19. *LMNO* is a parallelogram. If $NM = x + 6$ and $OL = 2x + 4$ find the value of $x$ and then find *NM* and *OL*.




20. *LMNO* is a parallelogram. If $NM = x + 24$ and $OL = 3x + 8$ find the value of $x$ and then find *NM* and *OL*.




21. Draw a venn diagram relating squares and rhumbuses?

22. Make a sketch of each quadrilateral from unit 7 and place markings on the sketch relating to its definition.

**Multiple Choice**
*Identify the choice that best completes the statement or answers the question.*

____ 23. Which statement is true?
a. All rectangles are quadrilaterals.
b. All quadrilaterals are parallelograms.

____ 24. Which statement is true?
a. All quadrilaterals are squares.
b. All rectangles are parallelograms.

____ 25. Which statement is true?
a. All quadrilaterals are rectangles.
b. All squares are rectangles.

____ 26. Which statement is true?
a. All parallelograms are quadrilaterals.
b. All parallelograms are rectangles.

____ 27. Which statement is true?
a. All squares are quadrilaterals.
b. All rectangles are squares.