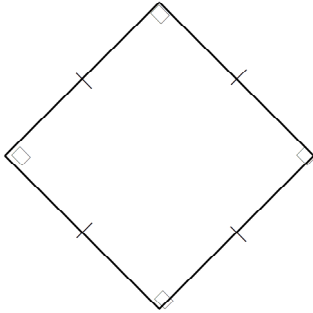


Chapter 6 Test SAMPLE

Multiple Choice

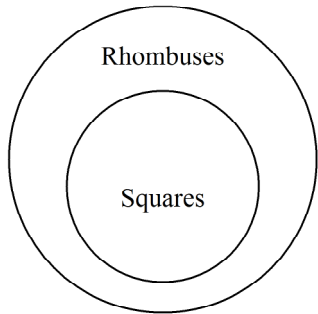
Identify the choice that best completes the statement or answers the question.

- _____ 1. Judging by appearance, classify the figure in as many ways as possible.

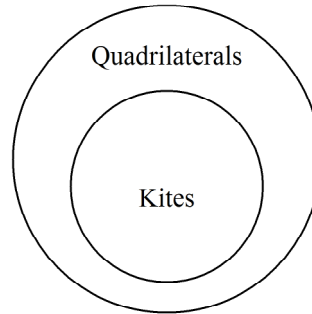


- a. rectangle, square, quadrilateral, parallelogram, rhombus
b. rectangle, square, parallelogram
c. rhombus, trapezoid, quadrilateral, square
d. square, rectangle, quadrilateral
- _____ 2. Which statement is true?
a. All quadrilaterals are rectangles.
b. All quadrilaterals are squares.
c. All rectangles are quadrilaterals.
d. All quadrilaterals are parallelograms.
- _____ 3. Which statement is true?
a. All rectangles are parallelograms.
b. All quadrilaterals are squares.
c. All parallelograms are rectangles.
d. All quadrilaterals are rectangles.

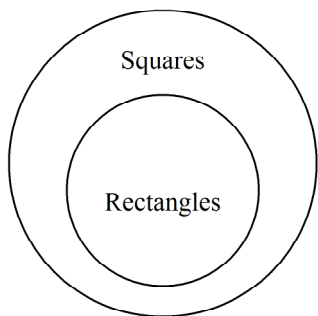
___ 4. Which Venn diagram is NOT correct?
a.



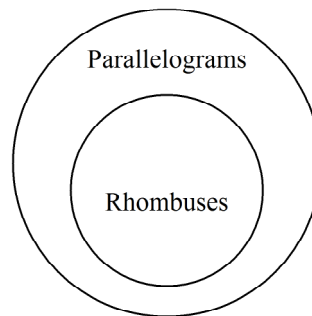
c.



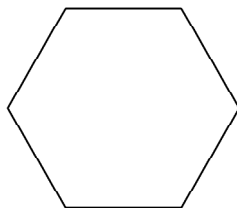
b.



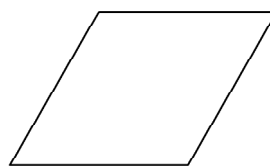
d.



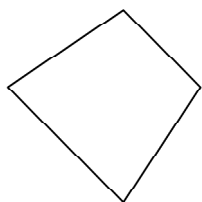
___ 5. Judging by appearances, which figure is a trapezoid?
a.



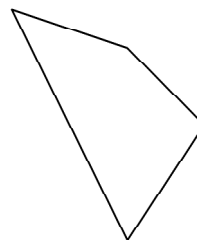
c.



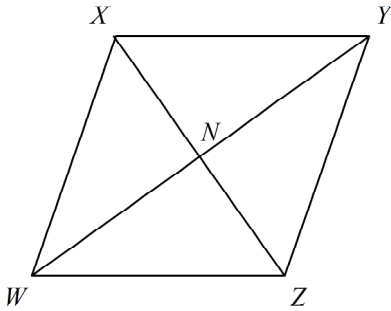
b.



d.



_____ 6. WXYZ is a parallelogram. Name an angle congruent to $\angle WZY$.

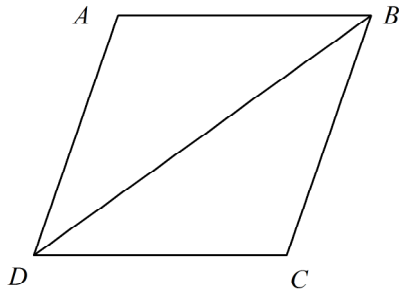


- a. $\angle ZXY$ b. $\angle XWZ$ c. $\angle ZXW$ d. $\angle WXY$

_____ 7. What is the missing reason in the proof?

Given: parallelogram $ABCD$ with diagonal \overline{BD}

Prove: $\triangle ABD \cong \triangle CDB$



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. $\triangle ABD \cong \triangle CDB$	6. ?

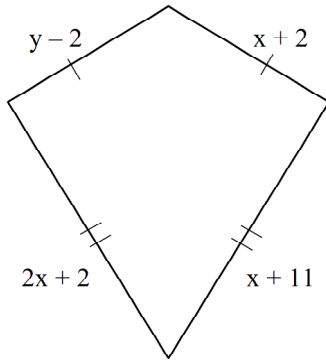
- a. Reflexive Property of Congruence c. Alternate Interior Angles Theorem
 b. ASA d. SSS

_____ 8. Which description does NOT guarantee that a trapezoid is isosceles?

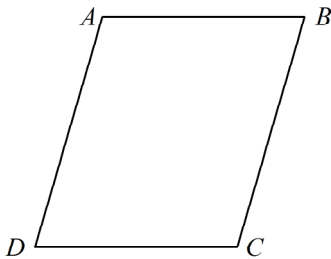
- a. congruent diagonals
 b. congruent bases
 c. both pairs of base angles congruent
 d. congruent legs

Short Answer

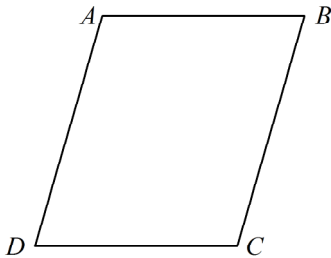
9. Find the values of the variables and the lengths of the sides of this kite.



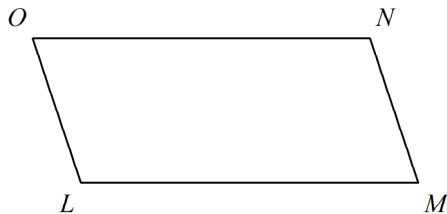
10. $ABCD$ is a parallelogram. If $m\angle CDA = 66$, then $m\angle BCD = \underline{\quad? \quad}$. The diagram is not to scale.



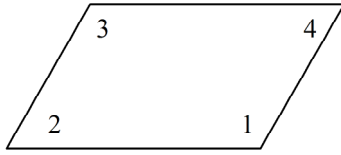
11. $ABCD$ is a parallelogram. If $m\angle DAB = 115$, then $m\angle BCD = \underline{\quad? \quad}$. The diagram is not to scale.



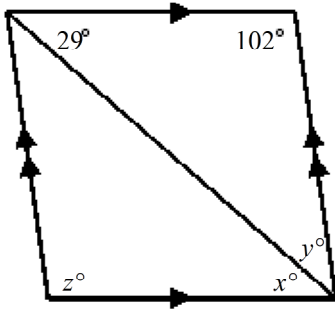
12. $LMNO$ is a parallelogram. If $NM = x + 15$ and $OL = 3x + 5$ find the value of x and then find NM and OL .



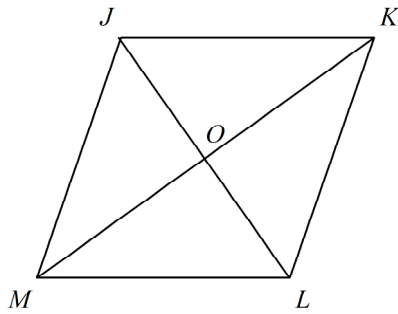
13. For the parallelogram, if $m\angle 2 = 5x - 28$ and $m\angle 4 = 3x - 10$, find $m\angle 3$. The diagram is not to scale.



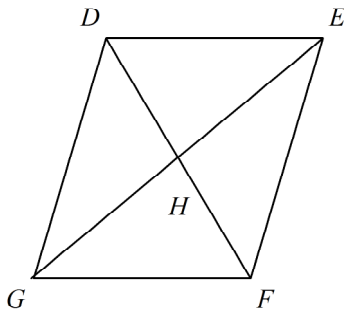
14. Find the values of the variables in the parallelogram. The diagram is not to scale.



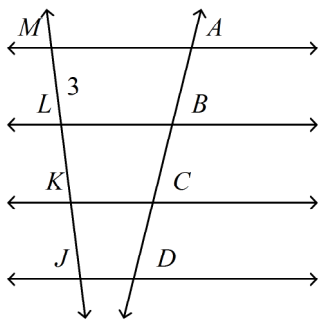
15. In the parallelogram, $m\angle KLO = 68$ and $m\angle MLO = 61$. Find $\angle KJM$. The diagram is not to scale.



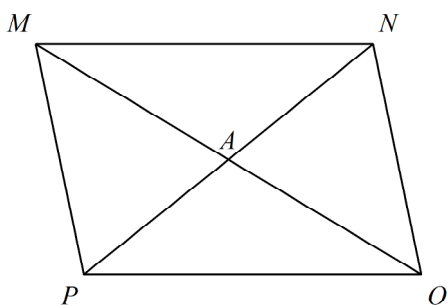
16. In parallelogram $DEFG$, $DH = x + 3$, $HF = 3y$, $GH = 4x - 5$, and $HE = 2y + 3$. Find the values of x and y . The diagram is not to scale.



17. In the figure, the horizontal lines are parallel and $AB = BC = CD$. Find JM . The diagram is not to scale.

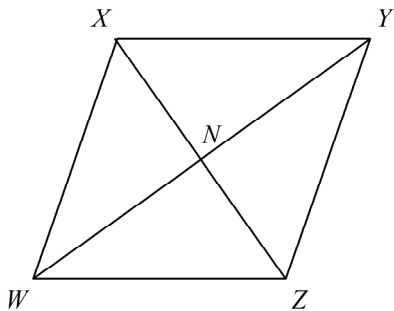


18. Find AM in the parallelogram if $PN = 9$ and $AO = 4$. The diagram is not to scale.



19. Based on the information given, can you determine that the quadrilateral must be a parallelogram? Explain.

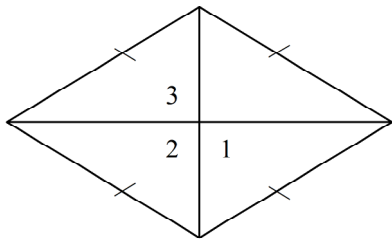
Given: $\overline{XY} \cong \overline{WZ}$ and $\overline{XW} \cong \overline{YZ}$



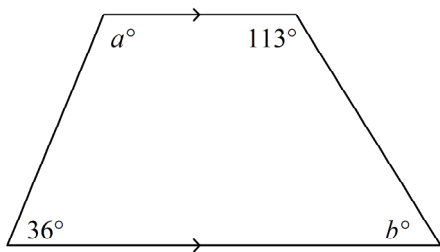
Name: _____

ID: A

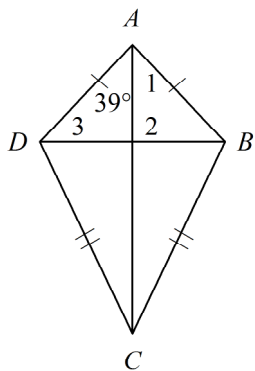
20. In the rhombus, $m\angle 1 = 6x$, $m\angle 2 = x + y$, and $m\angle 3 = 18z$. Find the value of each variable. The diagram is not to scale.



21. $DEFG$ is a rectangle. $DF = 5x - 5$ and $EG = x + 11$. Find the value of x and the length of each diagonal.
22. Find the values of a and b . The diagram is not to scale.



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

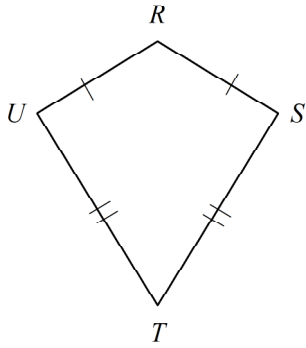


24. $\angle J$ and $\angle M$ are base angles of isosceles trapezoid $JKLM$. If $m\angle J = 20x + 9$, and $m\angle M = 14x + 15$, find $m\angle K$.

Name: _____

ID: A

25. $m\angle R = 130$ and $m\angle S = 80$. Find $m\angle T$. The diagram is not to scale.



Chapter 6 Test SAMPLE

Answer Section

MULTIPLE CHOICE

1. ANS: A PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals STA: CA GEOM 12.0
TOP: 6-1 Example 1
KEY: special quadrilaterals | quadrilateral | parallelogram | rhombus | square | rectangle | kite | trapezoid
2. ANS: C PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals STA: CA GEOM 12.0
KEY: reasoning | kite | parallelogram | quadrilateral | rectangle | rhombus | special quadrilaterals
3. ANS: A PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals STA: CA GEOM 12.0
KEY: reasoning | kite | parallelogram | quadrilateral | rectangle | rhombus | special quadrilaterals
4. ANS: B PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals STA: CA GEOM 12.0
KEY: reasoning | quadrilateral | Venn Diagram NOT: TC 12, MC, Static.
5. ANS: B PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals STA: CA GEOM 12.0
KEY: trapezoid
6. ANS: D PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
KEY: parallelogram | opposite angles
7. ANS: B PTS: 1 DIF: L3 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.2 Properties: Diagonals and Transversals STA: CA GEOM 7.0| CA GEOM 13.0
KEY: proof | two-column proof | parallelogram | diagonal
8. ANS: B PTS: 1 DIF: L4 REF: 6-5 Trapezoids and Kites
OBJ: 6-5.1 Properties of Trapezoids and Kites
STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0
KEY: trapezoid | isosceles trapezoid | reasoning

SHORT ANSWER

9. ANS:
 $x = 9, y = 13; 11, 20$

PTS: 1 DIF: L2 REF: 6-1 Classifying Quadrilaterals
OBJ: 6-1.1 Classifying Special Quadrilaterals STA: CA GEOM 12.0
TOP: 6-1 Example 3 KEY: algebra | kite
10. ANS:
114

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
TOP: 6-2 Example 1 KEY: parallelogram | consecutive angles

11. ANS:
115

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
KEY: parallelogram | opposite angles | Theorem 6-2

12. ANS:

$x = 5, NM = 20, OL = 20$

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
TOP: 6-2 Example 2 KEY: parallelogram | algebra | Theorem 6-1

13. ANS:

163

PTS: 1 DIF: L3 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
TOP: 6-2 Example 2
KEY: algebra | parallelogram | opposite angles | consecutive angles | Theorem 6-2

14. ANS:

$x = 29, y = 49, z = 102$

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
KEY: parallelogram | opposite angles | consecutive angles | transversal

15. ANS:

129

PTS: 1 DIF: L3 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.1 Properties: Sides and Angles STA: CA GEOM 7.0| CA GEOM 13.0
KEY: parallelogram | opposite angles

16. ANS:

$x = 3, y = 2$

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.2 Properties: Diagonals and Transversals STA: CA GEOM 7.0| CA GEOM 13.0
TOP: 6-2 Example 3
KEY: transversal | diagonal | parallelogram | Theorem 6-3 | algebra

17. ANS:

9

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms
OBJ: 6-2.2 Properties: Diagonals and Transversals STA: CA GEOM 7.0| CA GEOM 13.0
TOP: 6-2 Example 4 KEY: transversal | parallel lines | Theorem 6-4

18. ANS:

4

PTS: 1 DIF: L2 REF: 6-2 Properties of Parallelograms

OBJ: 6-2.2 Properties: Diagonals and Transversals STA: CA GEOM 7.0| CA GEOM 13.0

KEY: parallelogram | diagonal | Theorem 6-3

19. ANS:

Yes; opposite sides are congruent.

PTS: 1 DIF: L2 REF: 6-3 Proving That a Quadrilateral is a Parallelogram

OBJ: 6-3.1 Is the Quadrilateral a Parallelogram? STA: CA GEOM 7.0| CA GEOM 12.0

TOP: 6-3 Example 2 KEY: parallelogram | opposite sides | Theorem 6-7

20. ANS:

 $x = 15, y = 75, z = 5$

PTS: 1 DIF: L2 REF: 6-4 Special Parallelograms

OBJ: 6-4.1 Diagonals of Rhombuses and Rectangles

STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0 TOP: 6-4 Example 1

KEY: algebra | diagonal | rhombus | Theorem 6-13

21. ANS:

 $x = 4, DF = 15, EG = 15$

PTS: 1 DIF: L2 REF: 6-4 Special Parallelograms

OBJ: 6-4.1 Diagonals of Rhombuses and Rectangles

STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0 TOP: 6-4 Example 2

KEY: rectangle | algebra | Theorem 6-11 | diagonal

22. ANS:

 $a = 144, b = 67$

PTS: 1 DIF: L2 REF: 6-5 Trapezoids and Kites

OBJ: 6-5.1 Properties of Trapezoids and Kites

STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0 TOP: 6-5 Example 1

KEY: trapezoid | base angles | Theorem 6-15

23. ANS:

39, 51

PTS: 1 DIF: L2 REF: 6-5 Trapezoids and Kites

OBJ: 6-5.1 Properties of Trapezoids and Kites

STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0 TOP: 6-5 Example 3

KEY: kite | Theorem 6-17 | diagonal

24. ANS:

151

PTS: 1 DIF: L3 REF: 6-5 Trapezoids and Kites

OBJ: 6-5.1 Properties of Trapezoids and Kites

STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0

KEY: algebra | isosceles trapezoid | base angles | trapezoid | Theorem 6-15

25. ANS:
70

PTS: 1 DIF: L2 REF: 6-5 Trapezoids and Kites

OBJ: 6-5.1 Properties of Trapezoids and Kites

STA: CA GEOM 7.0| CA GEOM 12.0| CA GEOM 13.0 KEY: kite | sum of interior angles