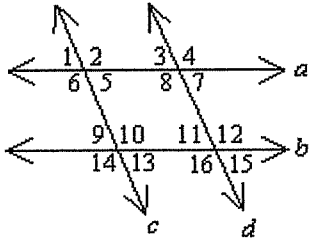


### GEOMETRY CHAPTER 3 WORKSHEET SET

#### Multiple Choice

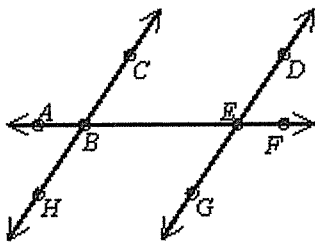
Identify the letter of the choice that best completes the statement or answers the question.

- \_\_\_\_ 1. Which angles are corresponding angles?



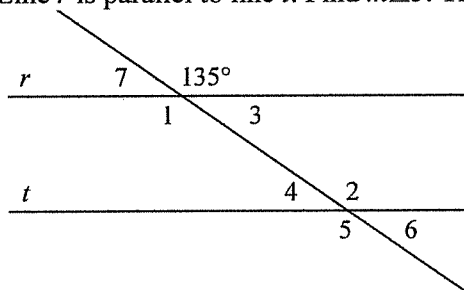
- a.  $\angle 8$  and  $\angle 16$                       c.  $\angle 4$  and  $\angle 8$   
 b.  $\angle 7$  and  $\angle 8$                       d. none of these

- \_\_\_\_ 2. Which statement is true?



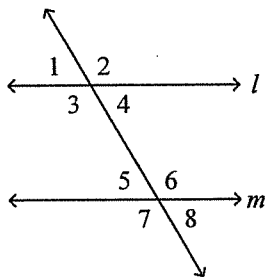
- a.  $\angle CBA$  and  $\angle EBH$  are same-side angles.  
 b.  $\angle EBH$  and  $\angle BED$  are same-side angles.  
 c.  $\angle CBA$  and  $\angle HBE$  are alternate interior angles.  
 d.  $\angle EBH$  and  $\angle BED$  are alternate interior angles.

- \_\_\_\_ 3. Line  $r$  is parallel to line  $t$ . Find  $m\angle 5$ . The diagram is not to scale.



- a. 45                      b. 35                      c. 135                      d. 145

4. Find the value of the variable if  $m \parallel l$ ,  $m\angle 1 = 2x + 44$  and  $m\angle 5 = 5x + 38$ . The diagram is not to scale.

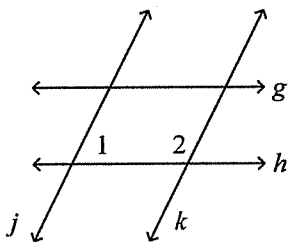


- a. 1                      b. 2                      c. 3                      d. -2

5. Complete the statement. If a transversal intersects two parallel lines, then \_\_\_\_.

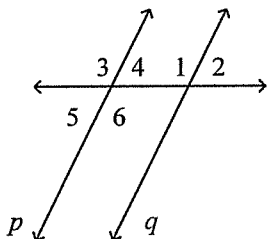
- a. corresponding angles are supplementary  
 b. consecutive interior angles are complementary  
 c. alternate interior angles are congruent  
 d. none of these

6. Which lines, if any, can you conclude are parallel given that  $m\angle 1 + m\angle 2 = 180$ ? Justify your conclusion with a theorem or postulate.



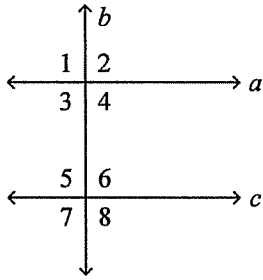
- a.  $j \parallel k$ , by the Converse of the Consecutive Interior Angles Theorem  
 b.  $j \parallel k$ , by the Converse of the Alternate Interior Angles Theorem  
 c.  $g \parallel h$ , by the Converse of the Alternate Interior Angles Theorem  
 d.  $g \parallel h$ , by the Converse of the Same-Side Interior Angles Theorem

7.  $m\angle 1 = 6x$  and  $m\angle 3 = 120$ . Find the value of  $x$  for  $p$  to be parallel to  $q$ . The diagram is not to scale.



- a. 114                      b. 126                      c. 120                      d. 20

8. If  $c \perp b$  and  $a \parallel c$ , what is  $m\angle 2$ ?

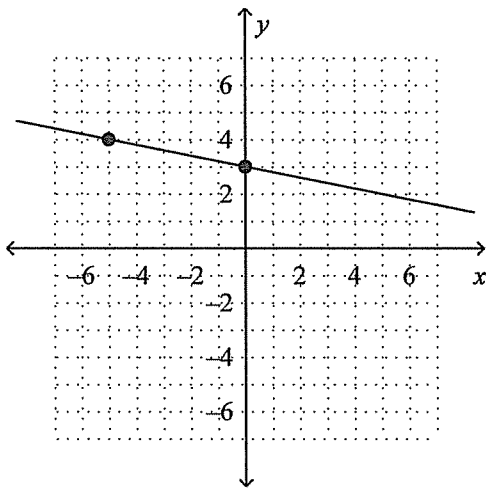


- a. 90
- b. 106

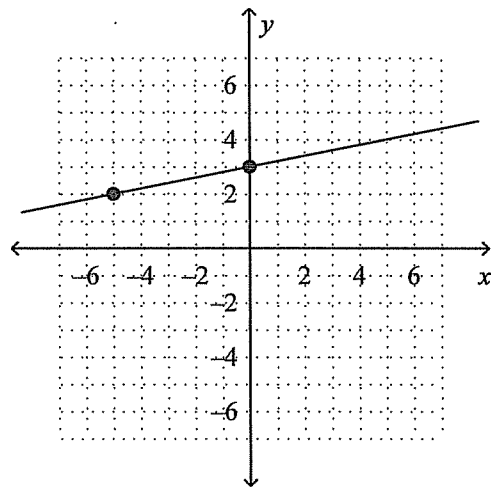
- c. 74
- d. not enough information

9. Graph  $y = \frac{1}{5}x + 3$ .

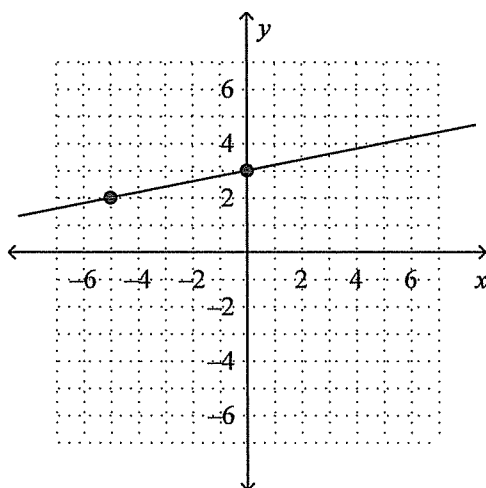
a.



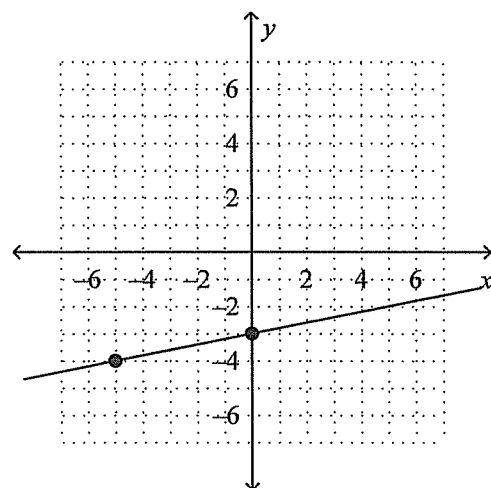
c.



b.

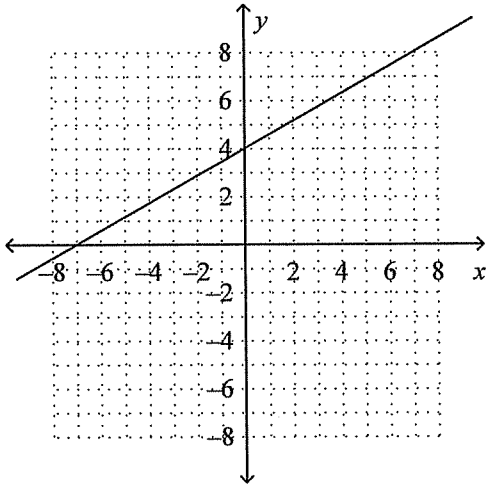


d.

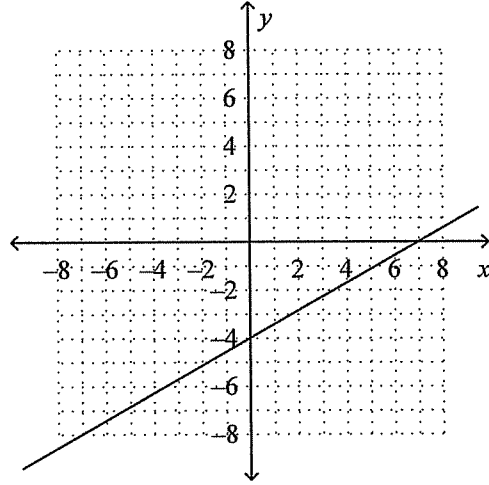


10. Graph  $-4x + 7y = -28$ .

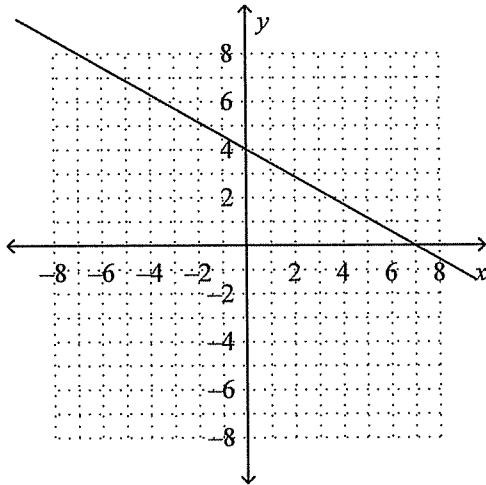
a.



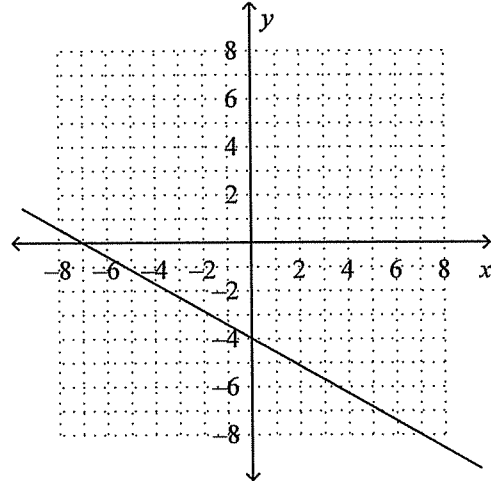
c.



b.



d.



11. Write an equation in point-slope form of the line through point  $J(-5, 6)$  with slope  $-4$ .

a.  $y - 6 = -4(x - 5)$

c.  $y + 6 = -4(x - 5)$

b.  $y - 6 = 4(x + 5)$

d.  $y - 6 = -4(x + 5)$

12. Write an equation in point-slope form,  $y - y_1 = m(x - x_1)$ , of the line through points  $(4, -4)$  and  $(1, 2)$  Use  $(4, -4)$  as the point  $(x_1, y_1)$ .

a.  $(y - 4) = -2(x + 4)$

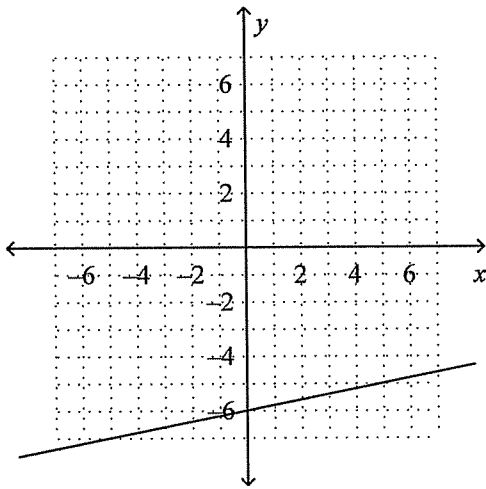
c.  $(y + 4) = 2(x - 4)$

b.  $(y - 4) = 2(x + 4)$

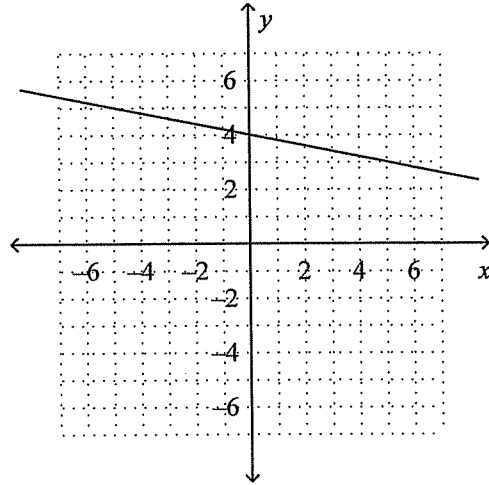
d.  $(y + 4) = -2(x - 4)$

13. Graph the line that goes through point  $(-5, 5)$  with slope  $\frac{1}{5}$ .

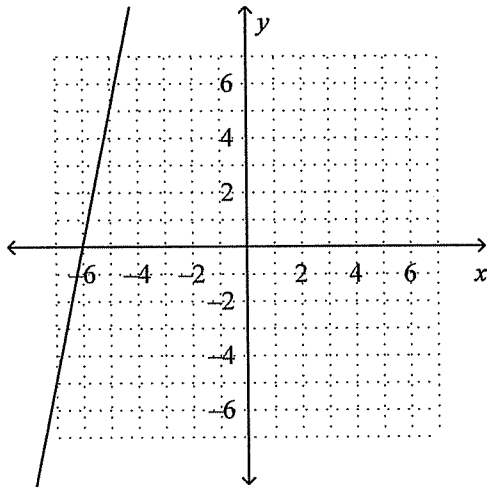
a.



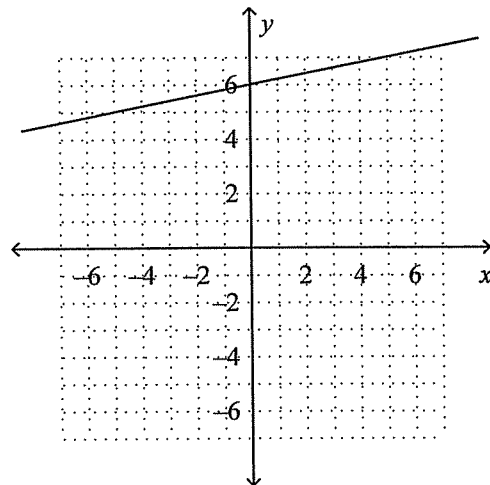
c.



b.



d.



14. Write an equation in slope-intercept form of the line through point  $P(-10, 1)$  with slope  $-5$ .

a.  $y = -5x - 49$

c.  $y - 10 = -5(x + 1)$

b.  $y - 1 = -5(x + 10)$

d.  $y = -5x + 1$

15. Is the line through points  $P(0, 5)$  and  $Q(-1, 8)$  parallel to the line through points  $R(3, 3)$  and  $S(5, -1)$ ? Explain.

a. No, the lines have unequal slopes.

b. Yes; the lines are both vertical.

c. Yes; the lines have equal slopes.

d. No, one line has slope, the other has no slope.

16. Which two lines are parallel?

I.  $5y = -3x - 5$

II.  $5y = -1 - 3x$

III.  $3y - 2x = -1$

a. I and II

c. II and III

b. I and III

d. No two of the lines are parallel.



## GEOMETRY CHAPTER 3 WORKSHEET SET

### Answer Section

#### MULTIPLE CHOICE

1. ANS: A                    DIF: L1                    REF: 3-1 Properties of Parallel Lines  
 OBJ: 3-1.1 Identifying Angles                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-1 Example 1                    KEY: corresponding angles, transversal, parallel lines  
 MSC: NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
2. ANS: D                    DIF: L1                    REF: 3-1 Properties of Parallel Lines  
 OBJ: 3-1.1 Identifying Angles                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-1 Example 1                    KEY: same-side interior angles, alternate interior angles  
 MSC: NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
3. ANS: C                    DIF: L1                    REF: 3-1 Properties of Parallel Lines  
 OBJ: 3-1.2 Properties of Parallel Lines                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-1 Example 4                    KEY: parallel lines, alternate interior angles  
 MSC: NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
4. ANS: B                    DIF: L1                    REF: 3-1 Properties of Parallel Lines  
 OBJ: 3-1.2 Properties of Parallel Lines                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-1 Example 5                    KEY: corresponding angles, parallel lines,  
 MSC: NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
5. ANS: C                    DIF: L1                    REF: 3-1 Properties of Parallel Lines  
 OBJ: 3-1.2 Properties of Parallel Lines                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 KEY: transversal, parallel lines  
 MSC: NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
6. ANS: A                    DIF: L1                    REF: 3-2 Proving Lines Parallel  
 OBJ: 3-2.1 Using a Transversal                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-2 Example 2                    KEY: parallel lines, reasoning  
 MSC: NAEP M1e, NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
7. ANS: D                    DIF: L1                    REF: 3-2 Proving Lines Parallel  
 OBJ: 3-2.2 Relating Parallel and Perpendicular Lines  
 STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4                    TOP: 3-2 Example 4  
 KEY: parallel lines  
 MSC: NAEP M1e, NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16

8. ANS: A                    DIF: L2                    REF: 3-2 Proving Lines Parallel  
 OBJ: 3-2.2 Relating Parallel and Perpendicular Lines  
 STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 KEY: parallel lines,perpendicular lines,transversal  
 MSC: NAEP M1e, NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
9. ANS: B                    DIF: L1                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.1 Graphing Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 TOP: 3-5 Example 1                    KEY: slope-intercept form,graphing  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
10. ANS: C                    DIF: L1                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.1 Graphing Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 TOP: 3-5 Example 2                    KEY: graphing,standard form of a linear equation  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
11. ANS: D                    DIF: L1                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.2 Writing Equations of Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 TOP: 3-5 Example 4                    KEY: point-slope form  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
12. ANS: D                    DIF: L1                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.2 Writing Equations of Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 TOP: 3-5 Example 5                    KEY: point-slope form  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
13. ANS: D                    DIF: L2                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.2 Writing Equations of Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 KEY: graphing,slope-intercept form,slope,y-intercept  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
14. ANS: A                    DIF: L2                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.2 Writing Equations of Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 KEY: slope-intercept form  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
15. ANS: A                    DIF: L1                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.1 Slope and Parallel Lines                    STO: AL 1, AL 9    TOP: 3-6 Example 1  
 KEY: slopes of parallel lines,graphing,parallel lines  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
16. ANS: A                    DIF: L1                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.1 Slope and Parallel Lines                    STO: AL 1, AL 9    TOP: 3-6 Example 2  
 KEY: slopes of parallel lines,parallel lines  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16

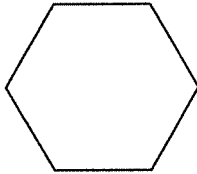
17. ANS: D                    DIF: L1                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.1 Slope and Parallel Lines                    STO: AL 1, AL 9    TOP: 3-6 Example 3  
 KEY: slopes of parallel lines,parallel lines  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
18. ANS: C                    DIF: L1                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.2 Slope and Perpendicular Lines                    STO: AL 1, AL 9  
 TOP: 3-6 Example 4                    KEY: slopes of perpendicular lines,perpendicular lines  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
19. ANS: D                    DIF: L1                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.2 Slope and Perpendicular Lines                    STO: AL 1, AL 9  
 TOP: 3-6 Example 5                    KEY: slopes of perpendicular lines,perpendicular lines  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
20. ANS: C                    DIF: L1                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.2 Slope and Perpendicular Lines                    STO: AL 1, AL 9  
 KEY: slopes of perpendicular lines,perpendicular lines,reasoning  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
21. ANS: D                    DIF: L2                    REF: 3-6 Slopes of Parallel and Perpendicular Lines  
 OBJ: 3-6.2 Slope and Perpendicular Lines                    STO: AL 1, AL 9  
 KEY: slopes of perpendicular lines,perpendicular lines,reasoning  
 MSC: NAEP M1e, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16
22. ANS: C                    DIF: L1                    REF: 3-1 Properties of Parallel Lines  
 OBJ: 3-1.2 Properties of Parallel Lines                    STO: AL 2, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 KEY: transversal,parallel lines,supplementary angles  
 MSC: NAEP M1f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
23. ANS: C                    DIF: L1                    REF: 3-5 Lines in the Coordinate Plane  
 OBJ: 3-5.2 Writing Equations of Lines                    STO: AL 9, AL 12, AL GE V-1, AL GE V-2  
 TOP: 3-5 Example 6                    KEY: vertical line  
 MSC: NAEP A1h, NAEP A2a, CAT5.LV20.50, IT.LV16.AM, IT.LV16.CP, S9.TSK2.PRA, S10.TSK2.PRA, TV.LV20.16

**GEOMETRY CHAPTER 8 WORKSHEET SET**

**Multiple Choice**

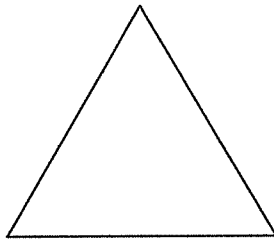
*Identify the letter of the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. Classify the polygon by its sides.



- a. triangle      b. hexagon      c. pentagon      d. octagon

- \_\_\_\_\_ 2. Find the sum of the measures of the angles of the figure.



- a. 540      b. 180      c. 360      d. 900

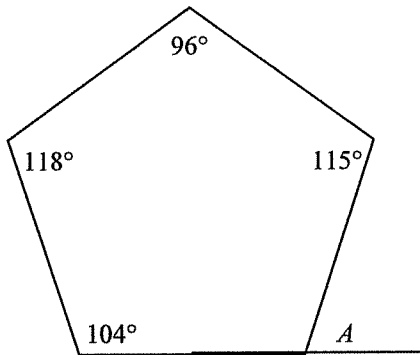
- \_\_\_\_\_ 3. How many sides does a regular polygon have if each exterior angle measures 20°?

- a. 17 sides      b. 20 sides      c. 21 sides      d. 18 sides

- \_\_\_\_\_ 4. The sum of the measures of two exterior angles of a triangle is 255°. What is the measure of the third exterior angle?

- a. 75      b. 115      c. 105      d. 95

- \_\_\_\_\_ 5. Find  $m\angle A$ . The diagram is not to scale.

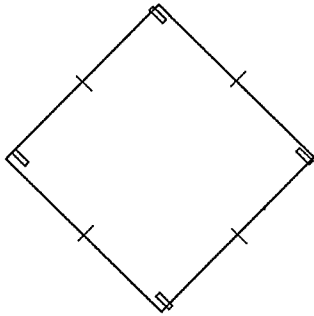


- a. 107      b. 117      c. 63      d. 73

Name: \_\_\_\_\_

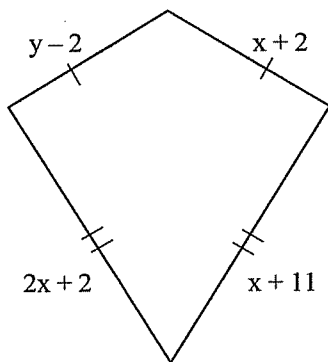
ID: A

\_\_\_\_\_ 6. 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

\_\_\_\_\_ 7. Find the values of the variables and the lengths of the sides of this kite.



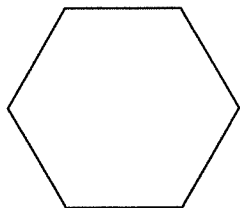
- a.  $x = 9, y = 13; 7, 15$
- b.  $x = 13, y = 9; 7, 15$
- c.  $x = 9, y = 13; 11, 20$
- d.  $x = 13, y = 9; 11, 11$

\_\_\_\_\_ 8. Which statement is true?

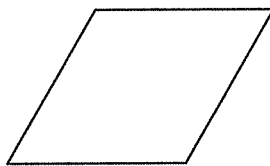
- a. All quadrilaterals are rectangles.
- b. All quadrilaterals are squares.
- c. All rectangles are quadrilaterals.
- d. All quadrilaterals are parallelograms.

9. Judging by appearances, which figure is a trapezoid?

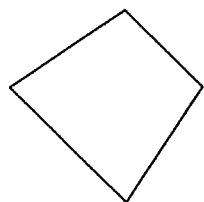
a.



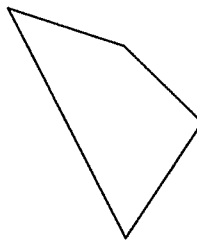
c.



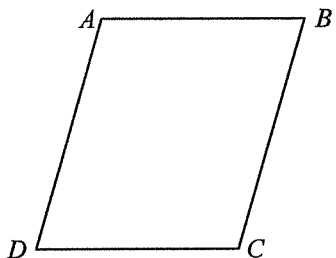
b.



d.



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



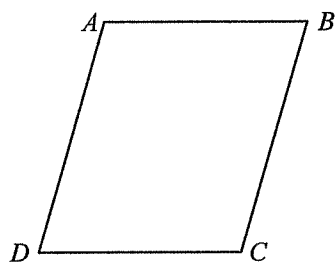
a. 66

b. 124

c. 114

d. 132

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



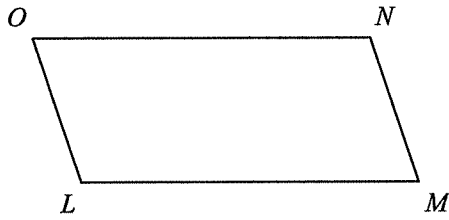
a. 125

b. 65

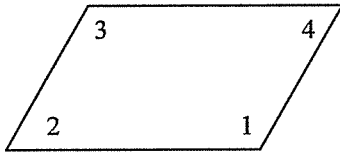
c. 75

d. 115

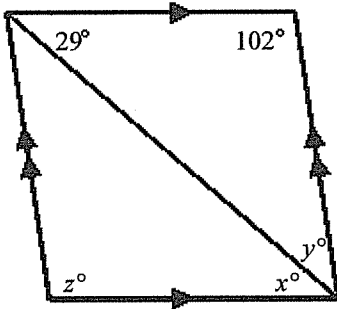
- \_\_\_ 12.  $LMNO$  is a parallelogram. If  $NM = x + 15$  and  $OL = 3x + 5$  find the value of  $x$  and then find  $NM$  and  $OL$ .



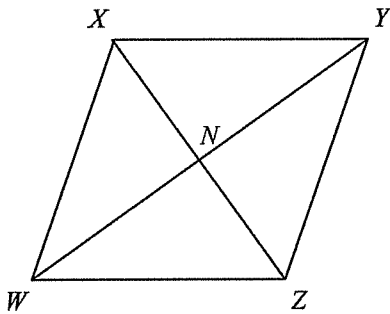
- a.  $x = 7, NM = 20, OL = 22$                       c.  $x = 7, NM = 22, OL = 22$   
 b.  $x = 5, NM = 20, OL = 20$                       d.  $x = 5, NM = 22, OL = 20$
- \_\_\_ 13. For the parallelogram, if  $m\angle 2 = 5x - 28$  and  $m\angle 4 = 3x - 10$ , find  $m\angle 3$ . The diagram is not to scale.



- a. 9                      b. 17                      c. 173                      d. 163
- \_\_\_ 14. Find the values of the variables in the parallelogram. The diagram is not to scale.

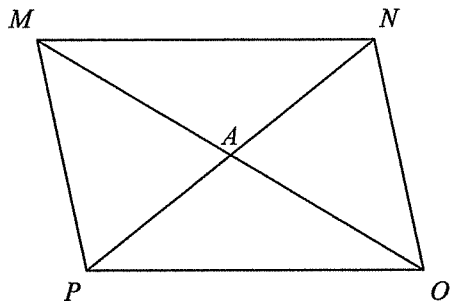


- a.  $x = 49, y = 29, z = 102$                       c.  $x = 49, y = 49, z = 131$   
 b.  $x = 29, y = 49, z = 131$                       d.  $x = 29, y = 49, z = 102$
- \_\_\_ 15.  $WXYZ$  is a parallelogram. Name an angle congruent to  $\angle WZY$ .



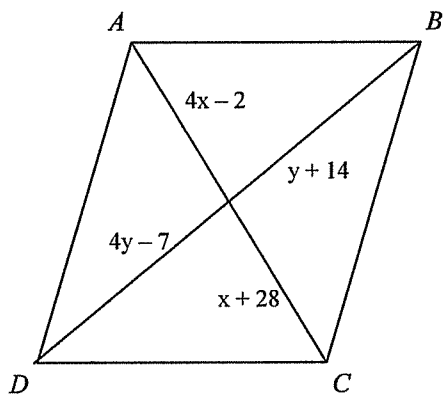
- a.  $\angle ZXY$                       b.  $\angle XWZ$                       c.  $\angle ZXW$                       d.  $\angle WXY$

\_\_\_\_\_ 16. Find  $AM$  in the parallelogram if  $PN=9$  and  $AO=4$ . The diagram is not to scale.



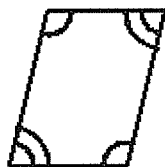
- a. 8                      b. 4                      c. 9                      d. 4.5

\_\_\_\_\_ 17. Find values of  $x$  and  $y$  for which  $ABCD$  must be a parallelogram. The diagram is not to scale.



- a.  $x=10, y=38$       b.  $x=10, y=21$       c.  $x=10, y=7$       d.  $x=7, y=10$

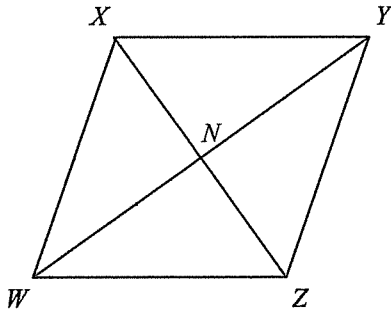
\_\_\_\_\_ 18. Based on the information in the diagram, can you prove that the figure is a parallelogram? Explain.



- a. Yes; opposite sides are congruent.  
 b. Yes; opposite angles are congruent.  
 c. No; you cannot prove that the quadrilateral is a parallelogram.  
 d. Yes; two opposite sides are both parallel and congruent.

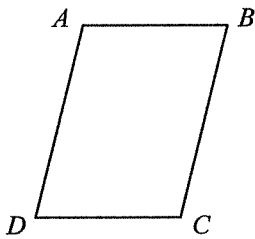
\_\_\_ 19. Based on the information given, can you determine that the quadrilateral must be a parallelogram? Explain.

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



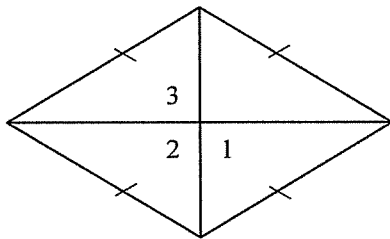
- a. No; you cannot determine that the quadrilateral is a parallelogram.
- b. Yes; two opposite sides are both parallel and congruent.
- c. Yes; opposite sides are congruent.
- d. Yes; diagonals of a parallelogram bisect each other.

\_\_\_ 20. If  $m\angle B = m\angle D = 41$ , find  $m\angle C$  so that quadrilateral  $ABCD$  is a parallelogram. The diagram is not to scale.



- a. 41
- b. 139
- c. 82
- d. 278

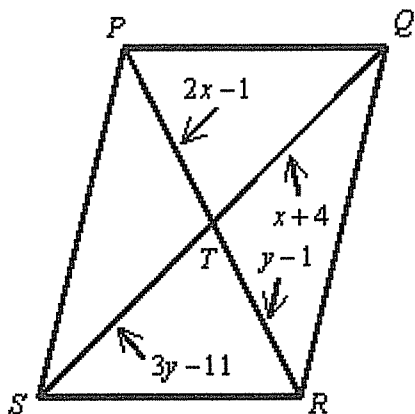
\_\_\_ 21. In the rhombus,  $m\angle 1 = 15x$ ,  $m\angle 2 = x + y$ , and  $m\angle 3 = 30z$ . Find the value of each variable. The diagram is not to scale.



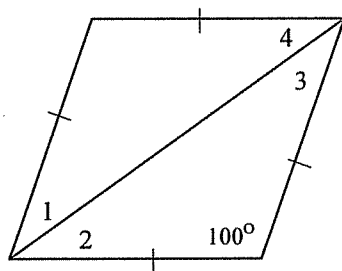
- a.  $x = 12, y = 84, z = 20$
- b.  $x = 6, y = 174, z = 20$
- c.  $x = 6, y = 84, z = 10$
- d.  $x = 12, y = 174, z = 10$



27. For parallelogram  $PQRS$ , find the values of  $x$  and  $y$ . Then find  $PT$ ,  $TR$ ,  $ST$ , and  $TQ$ . The diagram is not to scale.



28. Give the name that best describes the parallelogram and find the measures of the numbered angles. The diagram is not to scale.



## GEOMETRY CHAPTER 8 WORKSHEET SET

### Answer Section

#### MULTIPLE CHOICE

1. ANS: B                    DIF: L1                    REF: 3-4 The Polygon Angle-Sum Theorems  
 OBJ: 3-4.1 Classifying Polygons  
 STO: AL 4, AL 4a, AL 5, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-4 Example 2                    KEY: classifying polygons  
 MSC: NAEP G3b, NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
2. ANS: B                    DIF: L1                    REF: 3-4 The Polygon Angle-Sum Theorems  
 OBJ: 3-4.2 Polygon Angle Sums  
 STO: AL 4, AL 4a, AL 5, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-4 Example 3                    KEY: sum of angles of a polygon  
 MSC: NAEP G3b, NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
3. ANS: D                    DIF: L1                    REF: 3-4 The Polygon Angle-Sum Theorems  
 OBJ: 3-4.2 Polygon Angle Sums  
 STO: AL 4, AL 4a, AL 5, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 TOP: 3-4 Example 3                    KEY: sum of angles of a polygon  
 MSC: NAEP G3b, NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
4. ANS: C                    DIF: L1                    REF: 3-4 The Polygon Angle-Sum Theorems  
 OBJ: 3-4.2 Polygon Angle Sums  
 STO: AL 4, AL 4a, AL 5, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 KEY: angle,triangle,exterior angle,Polygon Angle-Sum Theorem  
 MSC: NAEP G3b, NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
5. ANS: D                    DIF: L2                    REF: 3-4 The Polygon Angle-Sum Theorems  
 OBJ: 3-4.2 Polygon Angle Sums  
 STO: AL 4, AL 4a, AL 5, AL 9, AL GE VI-1, AL GE VII-1, AL GE VII-4  
 KEY: pentagon,exterior angle,sum of angles of a polygon  
 MSC: NAEP G3b, NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
6. ANS: A                    DIF: L1                    REF: 6-1 Classifying Quadrilaterals  
 OBJ: 6-1.1 Classifying Special Quadrilaterals  
 STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4                    TOP: 6-1 Example 1  
 KEY: special quadrilaterals,quadrilateral,parallelogram,rhombus,square,rectangle,kite,trapezoid  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16

7. ANS: C                    DIF: L1                    REF: 6-1 Classifying Quadrilaterals  
 OBJ: 6-1.1 Classifying Special Quadrilaterals  
 STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4                    TOP: 6-1 Example 3  
 KEY: algebra,kite  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
8. ANS: C                    DIF: L1                    REF: 6-1 Classifying Quadrilaterals  
 OBJ: 6-1.1 Classifying Special Quadrilaterals  
 STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4  
 KEY: reasoning,kite,parallelogram,quadrilateral,rectangle,rhombus,special quadrilaterals  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
9. ANS: B                    DIF: L1                    REF: 6-1 Classifying Quadrilaterals  
 OBJ: 6-1.1 Classifying Special Quadrilaterals  
 STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4                    KEY: trapezoid  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
10. ANS: C                    DIF: L1                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.1 Properties: Sides and Angles    STO: AL 3, AL 5, AL 9  
 TOP: 6-2 Example 1                    KEY: parallelogram,consectutive angles  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16
11. ANS: D                    DIF: L1                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.1 Properties: Sides and Angles    STO: AL 3, AL 5, AL 9  
 KEY: parallelogram,opposite angles,Theorem 6-2  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16
12. ANS: B                    DIF: L1                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.1 Properties: Sides and Angles    STO: AL 3, AL 5, AL 9  
 TOP: 6-2 Example 2                    KEY: parallelogram,algebra,Theorem 6-1  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16
13. ANS: D                    DIF: L2                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.1 Properties: Sides and Angles    STO: AL 3, AL 5, AL 9  
 TOP: 6-2 Example 2  
 KEY: algebra,parallelogram,opposite angles,consectutive angles,Theorem 6-2  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16
14. ANS: D                    DIF: L1                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.1 Properties: Sides and Angles    STO: AL 3, AL 5, AL 9  
 KEY: parallelogram,opposite angles,consectutive angles,transversal  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16
15. ANS: D                    DIF: L1                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.1 Properties: Sides and Angles    STO: AL 3, AL 5, AL 9  
 KEY: parallelogram,opposite angles  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16

16. ANS: B                    DIF: L1                    REF: 6-2 Properties of Parallelograms  
 OBJ: 6-2.2 Properties: Diagonals and Transversals                    STO: AL 3, AL 5, AL 9  
 KEY: parallelogram,diagonal,Theorem 6-3  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16
17. ANS: C                    DIF: L1                    REF: 6-3 Proving That a Quadrilateral is a Parallelogram  
 OBJ: 6-3.1 Is the Quadrilateral a Parallelogram?                    STO: AL 3, AL 5, AL 9, AL GE VII-1  
 TOP: 6-3 Example 1                    KEY: algebra,parallelogram,Theorem 6-5,diagonal  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, IT.LV16.PS, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16, TV.LV20.17, TV.LV20.18
18. ANS: B                    DIF: L1                    REF: 6-3 Proving That a Quadrilateral is a Parallelogram  
 OBJ: 6-3.1 Is the Quadrilateral a Parallelogram?                    STO: AL 3, AL 5, AL 9, AL GE VII-1  
 TOP: 6-3 Example 2                    KEY: opposite angles,parallelogram,Theorem 6-8  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, IT.LV16.PS, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16, TV.LV20.17, TV.LV20.18
19. ANS: C                    DIF: L1                    REF: 6-3 Proving That a Quadrilateral is a Parallelogram  
 OBJ: 6-3.1 Is the Quadrilateral a Parallelogram?                    STO: AL 3, AL 5, AL 9, AL GE VII-1  
 TOP: 6-3 Example 2                    KEY: parallelogram,opposite sides,Theorem 6-7  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, IT.LV16.PS, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16, TV.LV20.17, TV.LV20.18
20. ANS: B                    DIF: L1                    REF: 6-3 Proving That a Quadrilateral is a Parallelogram  
 OBJ: 6-3.1 Is the Quadrilateral a Parallelogram?                    STO: AL 3, AL 5, AL 9, AL GE VII-1  
 KEY: opposite angles,parallelogram,Theorem 6-8  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, IT.LV16.PS, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16, TV.LV20.17, TV.LV20.18
21. ANS: C                    DIF: L1                    REF: 6-4 Special Parallelograms  
 OBJ: 6-4.1 Diagonals of Rhombuses and Rectangles                    STO: AL 3, AL 5, AL 9  
 TOP: 6-4 Example 1                    KEY: algebra,diagonal,rhombus,Theorem 6-13  
 MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16
22. ANS: A                    DIF: L1                    REF: 6-5 Trapezoids and Kites  
 OBJ: 6-5.1 Properties of Trapezoids and Kites                    STO: AL 3, AL 5, AL 9  
 TOP: 6-5 Example 1                    KEY: trapezoid,base angles,Theorem 6-15  
 MSC: NAEP G3f, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.CP, S9.TSK2.GM, S10.TSK2.GM, TV.LV20.13, TV.LV20.14
23. ANS: A                    DIF: L2                    REF: 6-5 Trapezoids and Kites  
 OBJ: 6-5.1 Properties of Trapezoids and Kites                    STO: AL 3, AL 5, AL 9  
 KEY: algebra,isosceles trapezoid,base angles,trapezoid,Theorem 6-15  
 MSC: NAEP G3f, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.CP, S9.TSK2.GM, S10.TSK2.GM, TV.LV20.13, TV.LV20.14

## SHORT ANSWER

24. ANS:

$$x = 7, y = 4; 20, 35$$

DIF: L2 REF: 6-1 Classifying Quadrilaterals

OBJ: 6-1.1 Classifying Special Quadrilaterals

STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4

TOP: 6-1 Example 3

KEY: algebra, rectangle

MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16

25. ANS:

trapezoid

DIF: L1 REF: 6-1 Classifying Quadrilaterals

OBJ: 6-1.1 Classifying Special Quadrilaterals

STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4

KEY: quadrilateral, reasoning, algebra, trapezoid, rhombus, square, parallelogram

MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16

26. ANS:

7

DIF: L1 REF: 6-1 Classifying Quadrilaterals

OBJ: 6-1.1 Classifying Special Quadrilaterals

STO: AL 3, AL 5, AL 9, AL 12, AL GE VII-4

KEY: isosceles trapezoid, algebra

MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16

27. ANS:

$$x = 3, y = 6; 5, 5, 7, 7$$

DIF: L2 REF: 6-2 Properties of Parallelograms

OBJ: 6-2.2 Properties: Diagonals and Transversals

STO: AL 3, AL 5, AL 9

TOP: 6-2 Example 3

KEY: parallelogram, algebra, multi-part question

MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.12, TV.LV20.14, TV.LV20.16

28. ANS:

Rhombus; the measure of all numbered angles equal 39.

DIF: L1 REF: 6-4 Special Parallelograms

OBJ: 6-4.1 Diagonals of Rhombuses and Rectangles

STO: AL 3, AL 5, AL 9

KEY: parallelogram, rhombus, reasoning

MSC: NAEP G3f, CAT5.LV20.50, CAT5.LV20.55, CAT5.LV20.56, IT.LV16.AM, IT.LV16.CP, S9.TSK2.GM, S9.TSK2.PRA, S10.TSK2.GM, S10.TSK2.PRA, TV.LV20.13, TV.LV20.14, TV.LV20.16