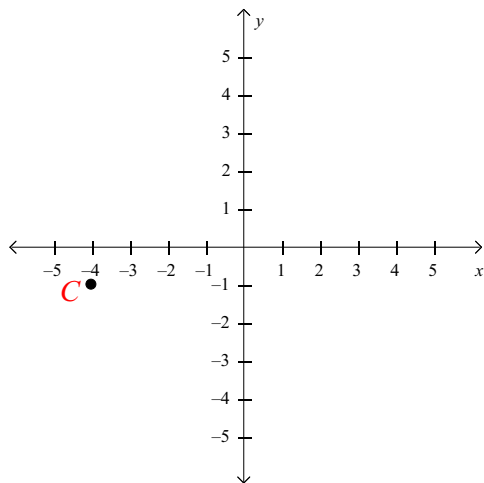


Algebra 1 - Chapter 4 - Practice Test - 2013

Short Answer

Write the ordered pair for the point shown on the graph. Name the quadrant in which the point is located.

1.

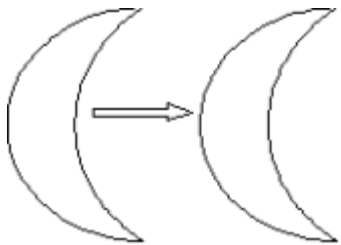


Plot the point on a coordinate plane above.

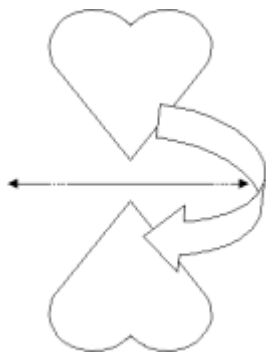
2. $U(5, -5)$

Identify each transformation as a reflection, translation, dilation, or rotation.

3.



4.



Find the coordinates of the vertices of the figure after the given transformation is performed. Then graph the preimage and its image.

5. parallelogram $ABCD$ with $A(-5, -2)$, $B(-4, 2)$, $C(-1, 2)$, and $D(-2, -2)$ translated 6 units right and 3 units down.
6. triangle LMN with $L(-2, -2)$, $M(0, 2)$, $N(2, -2)$ dilated by a scale factor of 2.
7. triangle LMN with $L(-5, -5)$, $M(-5, 5)$, $N(5, -5)$ dilated by a scale factor of $\frac{1}{5}$.
8. triangle LMN with $L(-3, -1)$, $M(-2, 3)$, $N(-1, -1)$ rotated 180° about the origin.
9. triangle LMN with $L(-3, -1)$, $M(-3, 3)$, $N(-1, -1)$ rotated 90° counterclockwise about the origin.
10. triangle ABC with $A(-5, -2)$, $B(-1.5, 2)$, $C(2, -2)$ translated 4 units right and 3 units up.
11. triangle ABC with $A(-4, -3)$, $B(-4, 2)$, and $C(2, -3)$ reflected over the y -axis

Express each relation as a graph and a mapping. Then determine the domain and range.

12. $\{(3, 1), (2, -5), (2, 4), (3, 3)\}$
13. $\{(1, -2), (-2, -3), (2, 4), (1, -4)\}$

Express the relation as a table and a graph. Then determine the domain and range.

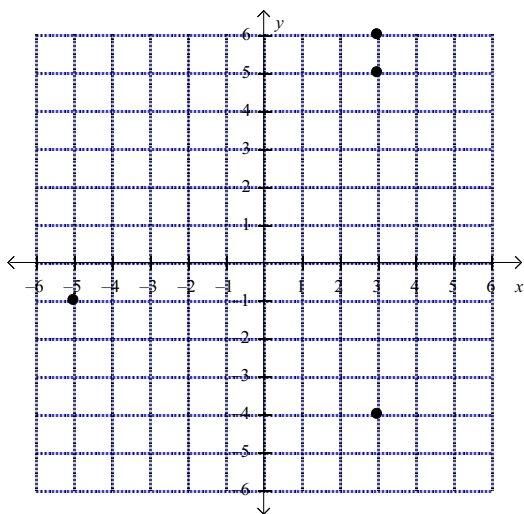
14. $\{(4, 0), (3, 2), (3, 0), (-3, -2), (4, -1)\}$
15. $\{(1, 1), (3, 3), (4, 4), (0, 0), (-4, -4)\}$

Express the relation shown in each table, mapping, or graph as a set of ordered pairs. Then write the inverse of the relation.

16.

x	y
3	5
4	2
3	3
2	6

17.



Find the solution set for the equation, given the replacement set.

18. $y = 7x + 6$; $\{(5, 41), (6, 44), (4, 39), (7, 42)\}$

19. $-x + 5y = -2$; $\{(7, 1.6), (5, 0.6), (6, 3.6), (4, -1.4)\}$

Solve the equation for the given domain. Graph the solution set.

20. $y = 2x - 1$ for $x = \{-3, -1, 1, 2, 3\}$

21. $3x - y = -1$ for $x = \{-1, 0, 1, 4\}$

Determine whether the equation is a linear equation. If so, write the equation in standard form.

22. $y + 3 = 0$

23. $8n - 9m = 6 - 3m$

Graph the equation.

24. $y = 4x - 4$

25. $-4x + 4y = +1$

26. $f(x) = 5x + 2$, find $f(3)$.

27. If $g(x) = x^2 + 4x - 5$, find $g(-4)$.

Determine whether the sequence is an arithmetic sequence. If it is, state the common difference.

28. $5, 0, -5, -10, \dots$

29. $2.6, 4.2, 3.1, 2.4, \dots$

Find the next three terms of the arithmetic sequence.

30. $55, 47, 39, 31, \dots$

31. $1\frac{4}{9}, 2\frac{1}{9}, 2\frac{7}{9}, 3\frac{4}{9}, \dots$

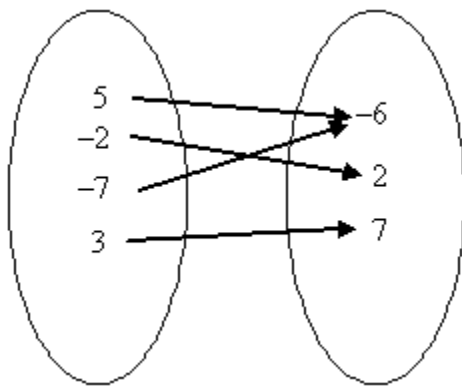
Write an equation for the n th term of the arithmetic sequence.

32. $11, 19, 27, 35, \dots$

33. $-29, -21, -13, -5, \dots$

Determine whether the relation is a function.

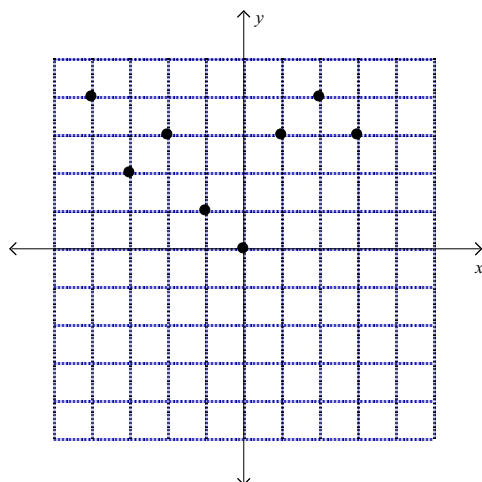
34.



35.

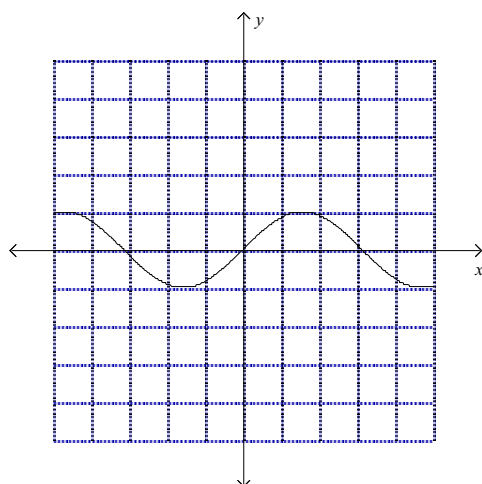
x	y
-8	-3
-2	0
5	7
9	2
7	-6
5	2

36.



37. $\{(5, 9), (4, 8), (-7, 4), (0, 4), (2, 4), (3, 9), (-3, 8)\}$

38.



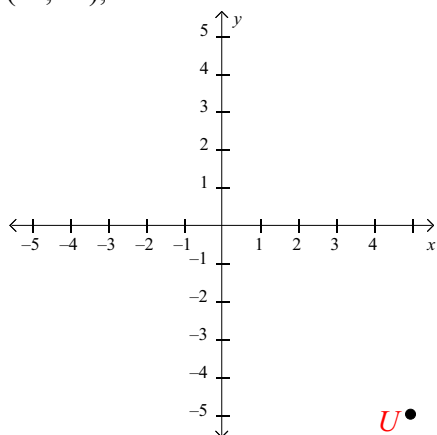
Algebra 1 - Chapter 4 - Practice Test - 2013

Answer Section

SHORT ANSWER

1. $(-4, -1)$; III

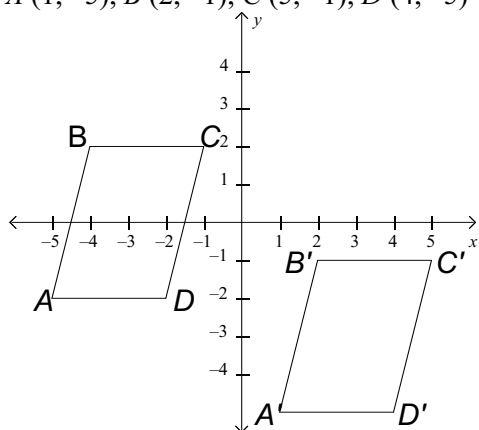
2.



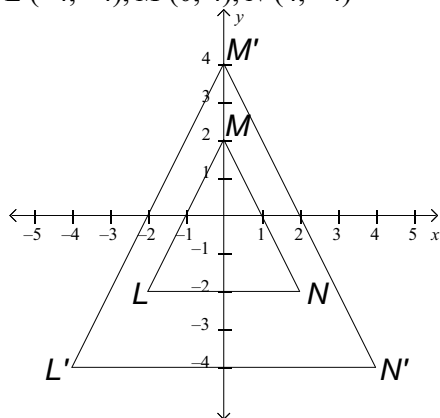
3. translation

4. reflection

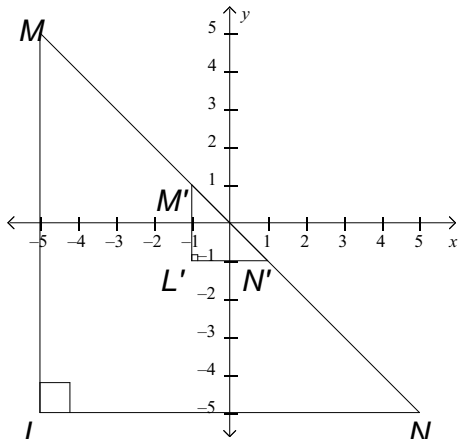
5. $A'(1, -5)$, $B'(2, -1)$, $C'(5, -1)$, $D'(4, -5)$



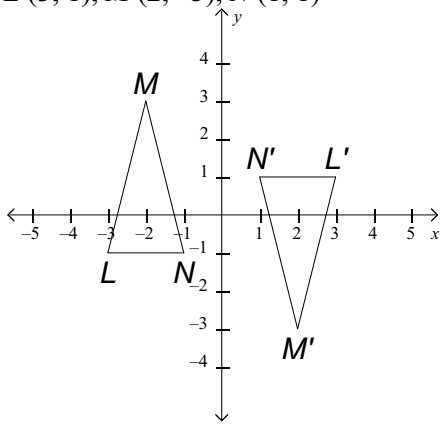
6. $L'(-4, -4)$, $M'(0, 4)$, $N'(4, -4)$



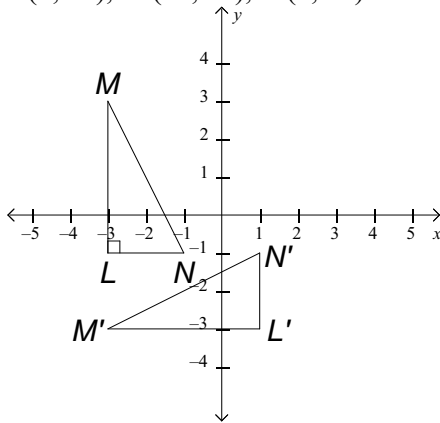
7. $L'(-1, -1)$, $M'(-1, 1)$, $N'(1, -1)$



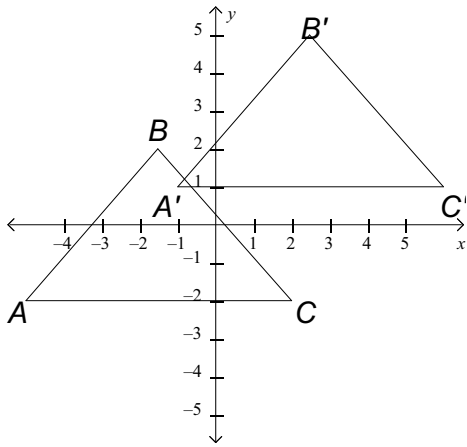
8. $L'(3, 1), M'(2, -3), N'(1, 1)$



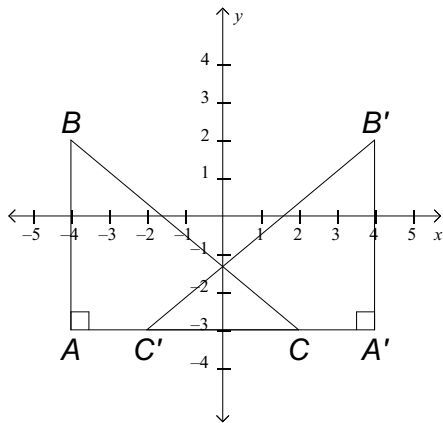
9. $L'(1, -3), M'(-3, -3), N'(1, -1)$



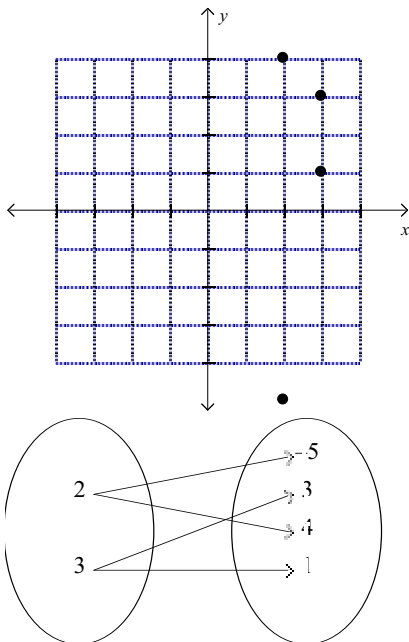
10. $A'(-1, 1), B'(2.5, 5), C'(6, 1)$



11. $A'(4, -3)$, $B'(4, 2)$, and $C'(-2, -3)$

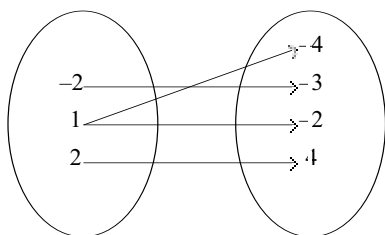
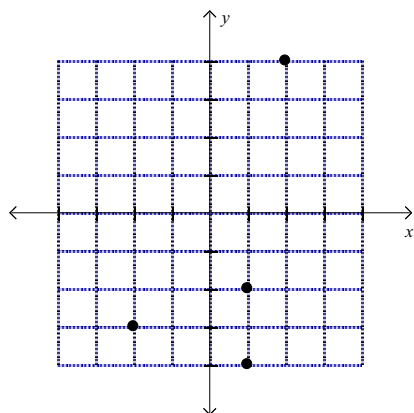


- 12.



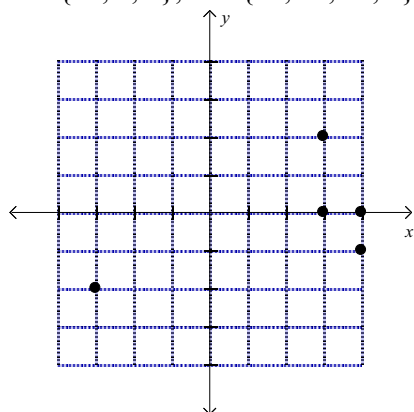
$$D = \{2, 3\}; R = \{-5, 1, 3, 4\}$$

13.



$$D = \{-2, 1, 2\}; R = \{-4, -3, -2, 4\}$$

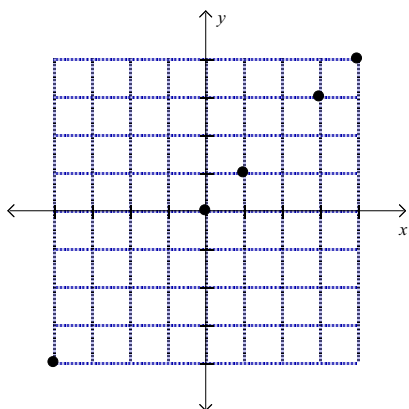
14.



x	y
4	0
3	2
3	0
-3	-2
4	-1

$$D = \{-3, 3, 4\}; R = \{-2, -1, 0, 2\}$$

15.



x	y
1	1
3	3
4	4
0	0
-4	-4

$D = \{-4, 0, 1, 3, 4\}$; $R = \{-4, 0, 1, 3, 4\}$

16. Relation: $\{(3, 5), (4, 2), (3, 3), (2, 6)\}$

Inverse: $\{(5, 3), (2, 4), (3, 3), (6, 2)\}$

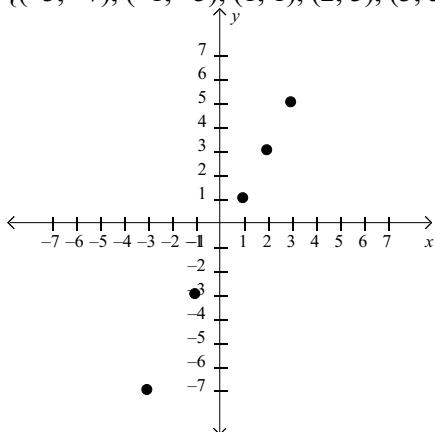
17. Relation: $\{(3, -4), (3, 6), (-5, -1), (3, 5)\}$

Inverse: $\{(-4, 3), (6, 3), (-1, -5), (5, 3)\}$

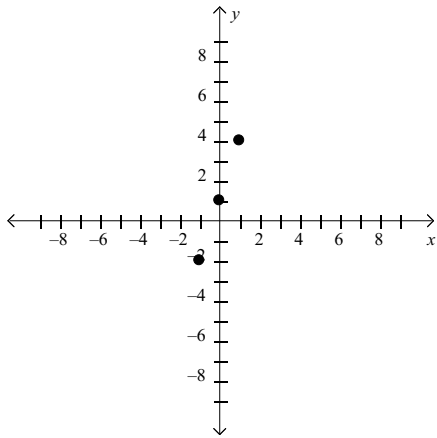
18. $\{(5, 41)\}$

19. $\{(5, 0.6)\}$

20. $\{(-3, -7), (-1, -3), (1, 1), (2, 3), (3, 5)\}$



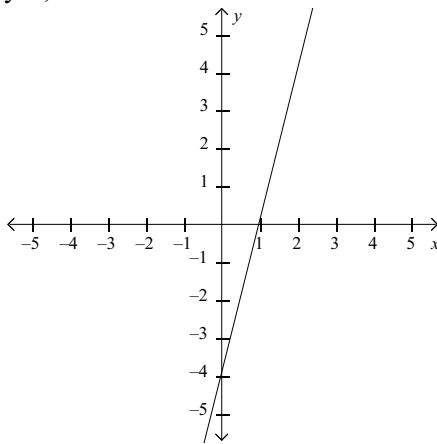
21. $\{(-1, -2), (0, 1), (1, 4), (4, 13)\}$



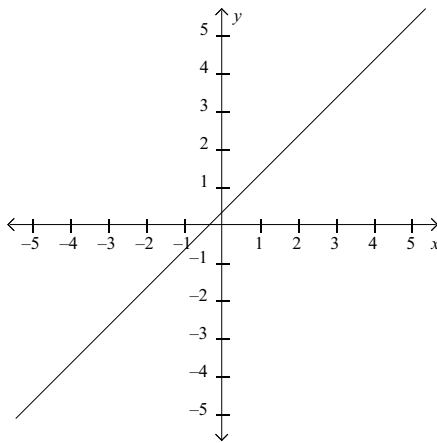
22. yes; $y = -3$

23. yes; $6m - 8n = -6$

24.



25.



26. 17

27. -5

28. yes, -5

29. no

30. 23, 15, 7

31. $4\frac{1}{9}, 4\frac{7}{9}, 5\frac{4}{9}$

32. $a_n = 8n + 3$

33. $a_n = 8n - 37$

34. Yes

35. No

36. Yes

37. Yes

38. Yes