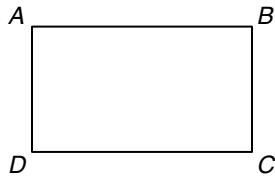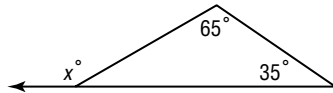# Sample Test

Test Practice

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

1 The perimeter of the rectangle shown below is $8x + 4$. The length of side DC is $2x + 2$. What is the length of side AD? **VII-4**

1 _____

A $2x$
B $3x$
C $6x + 2$
D $3x + 1$

2 What is the value of x? **VII-1**

2 _____

E $35°$
F $65°$
G $80°$
H $100°$

3 Simplify: $(x - 8)(x + 8)$ **I-3**

3 _____

 A $x^2 - 64$
 B $x^2 - 16x - 64$
 C $x^2 + 16x + 64$
 D x^2

4 Factor: $5x^2 - 5$ **I-4**

4 _____

 E $5(x - 1)$
 F $5(x + 1)$
 G $5(x + 1)(x - 1)$
 H $5(x - 1)(x - 1)$

Sample Test

Test Practice (continued) _____
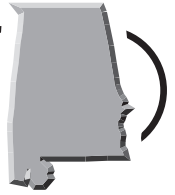
Read each question and choose the best answer. Then write the letter for the
answer you have chosen in the blank at the right of each question.

5 Solve: $\dfrac{x-3}{4} = \dfrac{2x-1}{5}$ **II-1**   5 _____
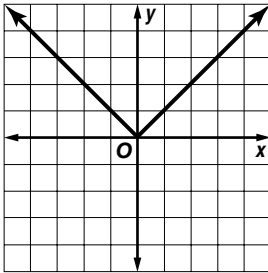
   A $-\dfrac{19}{3}$

   B $-\dfrac{11}{3}$

   C $-\dfrac{19}{13}$

   D $-\dfrac{11}{13}$

6 Which of these equations represents the graph below? **V-4**   6 _____

   E $y = |x|$
   F $y = x^2$
   G $y = \sqrt{x}$
   H $y = x$

7 Which of these equations represents the data in the table? **III-1**   7 _____

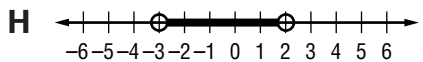| x	y
2	10
5	22
−3	−10

   A $y = x + 8$

   B $y = \dfrac{1}{2}x + 9$
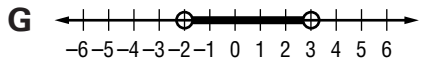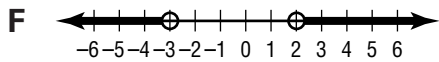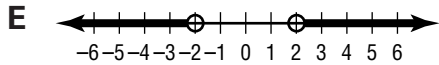
   C $y = 2x + 6$

   D $y = 4x + 2$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

8 Which of these graphs represents the solution of $-8 < 3x - 2 < 7$? **V-3**   8 _____

E

−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6

F

−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6

G

−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6

H

−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6

9 Simplify: $4w - 2z - (w + 3z)$ **I-1**   9 _____

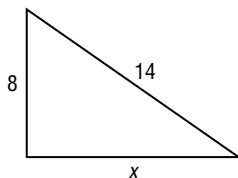**A** $-5w - 5z$

B $3w - 5z$

C $3w + z$

D $4w - 5z$

10 What is the mode of this set of data? **VII-5**   10 _____

4, 6, 9, 4, 2, 4, 6

E 9

F 6

G 4

H 2

11 What is the value of x in the right triangle below? **VII-2**   11 _____

A $2\sqrt{33}$

B $2\sqrt{3}$

C 10

D 6
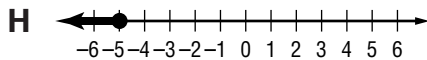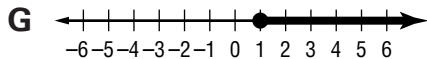
Sample Test

Test Practice (continued) _____

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

12 Which of these graphs represents the solution of $x - 3 \leq -2$? **V-3**   12 _____

E
    −6−5−4−3−2−1 0 1 2 3 4 5 6

F
    −6−5−4−3−2−1 0 1 2 3 4 5 6

G
    −6−5−4−3−2−1 0 1 2 3 4 5 6

H
    −6−5−4−3−2−1 0 1 2 3 4 5 6

13 What is the solution of the following system of linear equations? **II-3**   13 _____

$y = 2x$
$4x - y = 10$

A $\left(\dfrac{5}{3}, \dfrac{10}{3}\right)$

B $(5, 10)$

C $(-5, -10)$

D $(-2, -4)$

14 Given: $a \parallel b$, $m\angle 1 = 60°$. What is $m\angle 2$? **VII-1**   14 _____

E 30°
F 40°
G 60°
H 120°

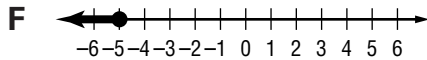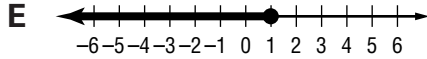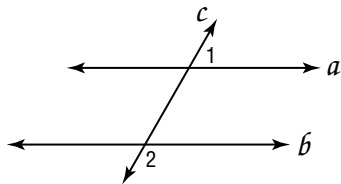**15** Solve: $-x + 4 = -5x + 16$ **II-1**   15 _____
A 4
B 3
C −3
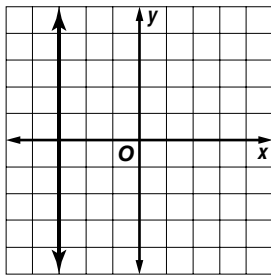**D** −4

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

16 Nick earned scores of 85, 90, 82, and 73 on his first four history tests. If Nick wants his mean test score to be 86 after five tests, what test score must he earn on his fifth test? **VII-5**

    E 100   **F** 90
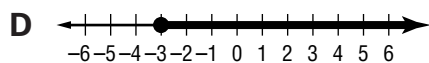
    G 80   **H** 70

16 _____

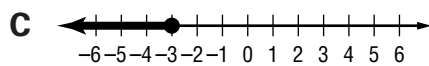**17** What is the equation of the line shown in the graph below? **V-1**

16 _____

    A $y = -3$ **B** $y = -x$

    C $y = x$ **D** $x = -3$

17 _____

18 If a circular rug has a diameter of 8 feet, what is the area of the rug to the nearest square foot? **IV-1**

Use $A = \pi r^2$ and $\pi = 3.14$.

    E 25 square feet

    F 50 square feet

    G 226 square feet

    H 452 square feet

18 _____

19 Which of these graphs represents the solution of $x > -3$? **V-3**

19 _____
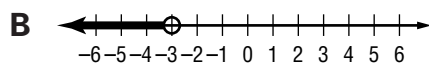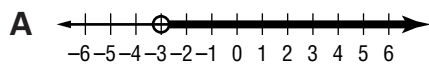
    A

    B

    C

    D

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

20 Which of these graphs represents the equation $f(x) = -x + 4$? **V-1**   **20** _____

E

F

G

H

21 The measure of an angle in degrees is $4x$. Which of these represents the measure of its supplement? **VII-1**   **21** _____

A $90 - 4x$
B $180 - 4x$
C $4x + 180$
D $4x + 90$

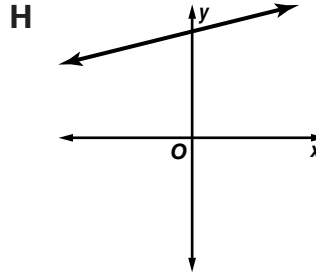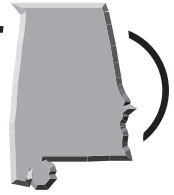**22** Which of these equations represents the graph at the right? **V-4**   **22** _____

E $y = -x$
F $y = -|x|$
G $y = x$
H $y = -x^2$
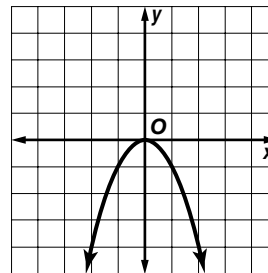
23 The area of a rectangular patio is 216 square feet. The length is 6 feet less than twice the width. What is the width of the patio? **VII-8**   **23** _____
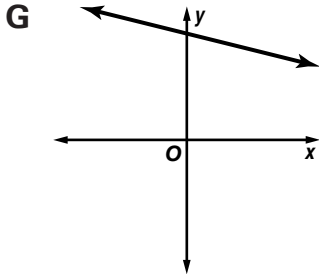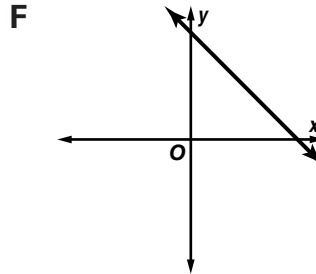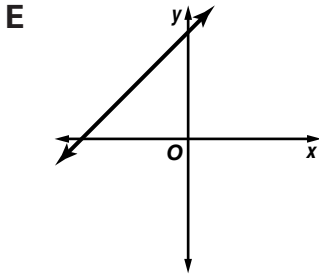
A 9 feet
B 10 feet
C 12 feet
D 18 feet

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

24 Solve: $-2(m - 4) < 2 - 4(2m + 3)$ **II-4**

   E $m < 2$

   F $m < -3$

   G $m < \dfrac{7}{6}$

   H $m > -\dfrac{7}{6}$

24 _____

25 A scale drawing is drawn to a scale of $1 : 5$. If the length of the actual object is 10 feet, what is the length of the scale drawing? **VII-7**

   A 2 inches

   B 20 inches

   C 24 inches

   D 50 inches

25 _____

26 Twenty-five tiles are placed in a box—7 white, 10 yellow, and 8 red. In a random drawing, two tiles are chosen without replacement. What is the probability that the first tile selected will be red and the second tile will be white? **VII-6**

   E $\dfrac{7}{75}$

   F $\dfrac{68}{75}$

   G $\dfrac{56}{625}$

   H $\dfrac{569}{625}$

26 _____

27 Which of these inequalities describes this graph? **VI-1**

−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6

   A $-1 < x < 5$

   B $-1 < x < 5$

   C $-1 < x \le 5$

   D $-1 \le x \le 5$

27 _____

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the
answer you have chosen in the blank at the right of each question.

28 Which of these graphs represents the equation $y = -4$? **V-1**   28 _____

E

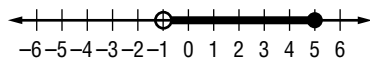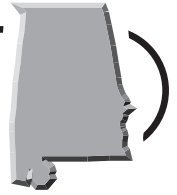**F**

G

H

29 What is the area of triangle ABC? **VII-4**   29 _____

A $4x^2 - 8x$
B $4x^2 - 4x$
C $2x^2 - 8x$
D $2x^2 - 4x$

30 Solve: $\dfrac{3x + 5}{4} = 5$ **II-1**   30 _____

E $\dfrac{25}{3}$

F 5

G 12

H 18

31 Solve: $5a - 1 > 4a + 7$ **II-4**   31 _____

A $a > \dfrac{2}{3}$

B $a < \dfrac{2}{3}$
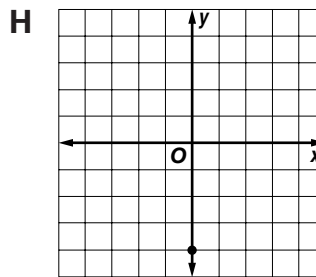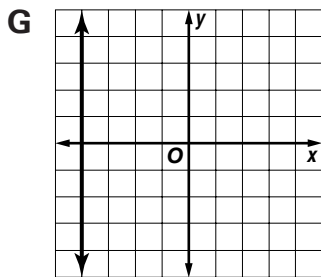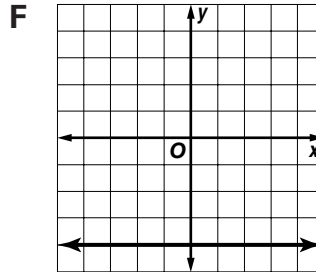
C $a < 8$

D $a > 8$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

32 Which of these graphs represents a line with *x*-intercept of 2 and *y*-intercept of −2? **V-2**

32 _____

E

F
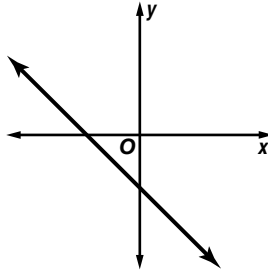
G
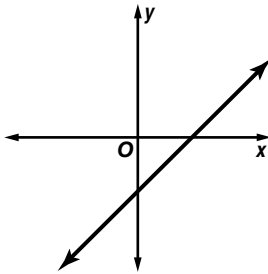
H
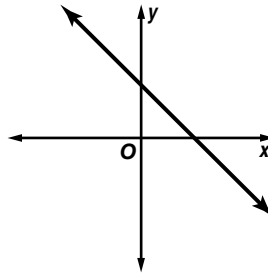
33 Solve: $6y - 3(y + 2) + 5 < 0$ **II-4**

33 _____

A $y < \dfrac{1}{3}$

B $y < -3$

C $y < -\dfrac{1}{3}$

D $y < 3$

34 Which of the following relations describes a function? **III-1**

34 _____

E $\{(-7, 8), (1, 4), (1, 8), (-1, 4)\}$
F $\{(-2, 1), (4, 5), (3, 2), (-2, 0)\}$
G $\{(6, 3), (5, -4), (5, -1), (-3, 2)\}$
H $\{(8, 1), (7, 4), (-7, -4), (-8, -5)\}$

35 What is the equation of a line with slope −2 that passes through the point (0, −4)? **VI-1**

35 _____

A $y = -4x + 2$
B $y = -4x - 2$
C $y = -2x - 4$
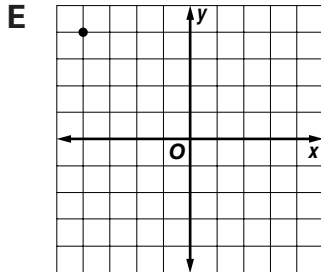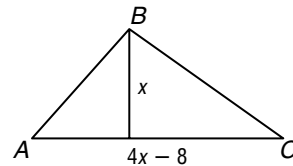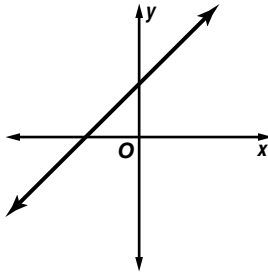**D** $y = -2x + 4$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

36 Simplify: $3 - |4 - 9| + 7$ **I-1**

  E -3
  F 5
  G 15
  H 23

36 _____

37 Which of these tables represents the function $f(x) = |x - 8|$? **III-1**

37 _____

A

x	f(x)
−3	11
−2	10
−1	9
0	8

B

x	f(x)
−3	−11
−2	−10
−1	−9
0	−8

C

x	f(x)
−3	5
−2	6
−1	7
0	8

D

x	f(x)
−3	−5
−2	−6
−1	−7
0	−8

38 A convex polygon has 14 sides. What is the sum of the measures of the interior angles? **VII-1**

  E 1980°
  F 2160°
  G 2520°
  H 2340°

38 _____

39 If $f(x) = -4x^2 + 3x - 2$, what is $f(-4)$? **III-2**

  A 18
  B 50
  C −46
  D −78

39 _____

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

40 What is the slope of the line shown in the graph? **IV-2**   40 _____

Slope Formula: $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

(−3, 0)   O

(3, −2)

E −3

F $-\dfrac{1}{3}$

G $\dfrac{1}{4}$

H 4

41 In a group of 30 people, 8 have blonde hair, 6 have black hair, 12 have   41 _____
brown hair, and 4 have red hair. If a person is chosen at random, what is
the probability that the person has blonde hair or red hair? **VII-6**

A $\dfrac{2}{15}$

B $\dfrac{2}{5}$

C $\dfrac{3}{5}$

D $\dfrac{13}{15}$

42 Simplify: $2r - 3\left(\dfrac{1}{3}r - \dfrac{1}{6}s\right) - \dfrac{1}{2}s$ **I-2**   42 _____

E $-r$

F r

G $r - \dfrac{1}{4}s$

H $r - s$

98   *AHSGE Practice and Sample Test Workbook*
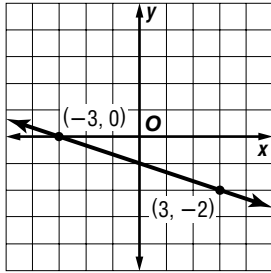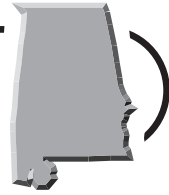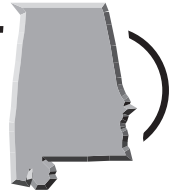
Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

43 Which of these graphs represents a line that has a slope of $-\dfrac{3}{2}$ and passes through $(4, -2)$? **V-2**

43 _____

A

B

C

D
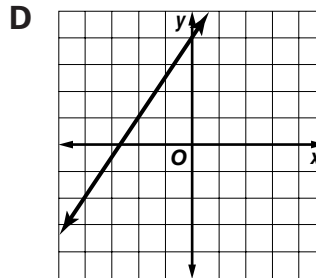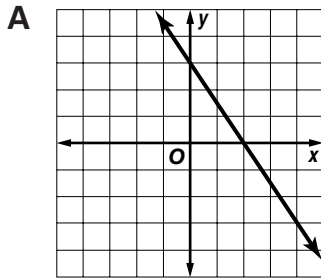
44 Factor: $2x(x - 4) - (x - 4)$ **I-4**

44 _____

    E $(2x - 1)(x - 4)^2$
    F $(2x - 1)(x - 4)$
    G $2x(x - 4)$
    H $2x(x - 4)^2$

45 The endpoints of $\overline{MP}$ are $(-5, 2)$ and $(8, -1)$. What are the coordinates of the midpoint of $\overline{MP}$? **IV-2**

45 _____

Midpoint Formula: $M = \left(\dfrac{x_1 + x_2}{2}, \dfrac{y_1 + y_2}{2}\right)$

    A $\left(\dfrac{3}{2}, \dfrac{1}{2}\right)$

    B $\left(\dfrac{13}{2}, \dfrac{3}{2}\right)$

    C $\left(-\dfrac{3}{2}, -\dfrac{1}{2}\right)$

    D $\left(-\dfrac{13}{2}, -\dfrac{3}{2}\right)$

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.
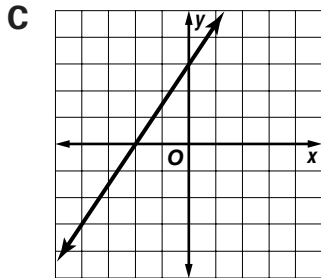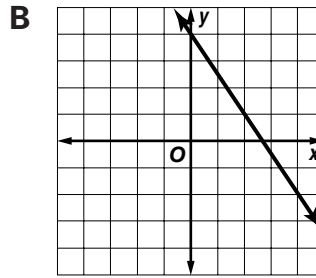
46 The sum of three consecutive integers is 111. What is the value of the greatest integer? **VII-8**

E 36
F 37
G 38
H 39

46 _____

47 Solve: $49x^2 - 1 = 0$ **II-2**

A $\dfrac{1}{49}, -\dfrac{1}{49}$

B $\dfrac{1}{7}, -\dfrac{1}{7}$

C $7, -7$

D $49, -49$

47 _____

48 If $ABCDEF \sim JKLMNO$, what is the length of segment JK? **VII-3**

E 6
F 4

G $1\dfrac{1}{2}$

H $\dfrac{2}{3}$

48 _____

49 What is the range of this function? **III-2**

$\{(-2, 6), (3, -1), (-4, 5), (2, -3)\}$

A $\{-4, -2, 2, 3\}$
B $\{-3, -1, 5, 6\}$
C $\{-4, -1, 5, 6\}$
D $\{-4, -3, -2, -1, 2, 3, 5, 6\}$

49 _____

Sample Test

Test Practice (continued) ———————————————————————

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.
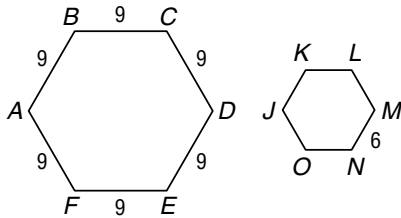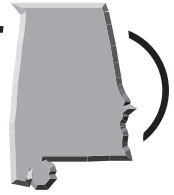
50 Which of these graphs represents the solution of $x - 2 > -1$ or $3x + 16 \leq 10$? **V-3**

50 _____

E
$$-6\,-5\,-4\,-3\,-2\,-1\ 0\ 1\ 2\ 3\ 4\ 5\ 6$$

F
$$-6\,-5\,-4\,-3\,-2\,-1\ 0\ 1\ 2\ 3\ 4\ 5\ 6$$

G
$$-6\,-5\,-4\,-3\,-2\,-1\ 0\ 1\ 2\ 3\ 4\ 5\ 6$$

H
$$-6\,-5\,-4\,-3\,-2\,-1\ 0\ 1\ 2\ 3\ 4\ 5\ 6$$

51 Which of these equations represents the graph below? **V-4**

51 _____
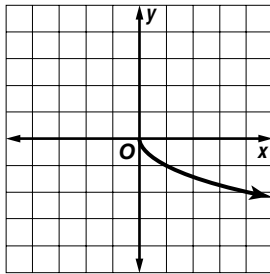
A $y = -x$
B $y = -|x|$
C $y = -\sqrt{x}$
D $y = -x^2$

52 Which of these statements is the same as $n^2 + 6n = 2$? **VI-1**

52 _____

   E The sum of 2 times a number n and 6 times the number n is 2.
   F Six times a number n squared plus the number n is 2.
   G A number n squared plus 6 times the number n is 2.
   H Six times the sum of a number n squared and the number n is 3.

53 Simplify: $\dfrac{2b - 6b}{-4} - 5b + 2$ **I-1**

53 _____

   A $-6b + 2$
   B $-7b + 2$
   C $-4b + 2$
   D $-5b + 2$

Sample Test

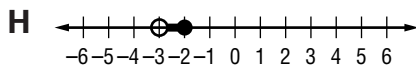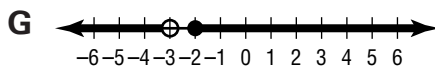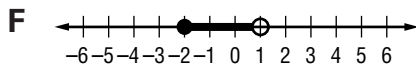**Test Practice** (continued) _____

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

54   What is the value of x in the right triangle below? **VII-2**

54 _____

8 ... x ... 16

  E $8\sqrt{5}$
  F $16\sqrt{5}$
  G 24
  H 4

55 A box has a volume of 864 cubic inches, a height of 6 inches, and a square base. What is the length of a side of the base? **VII-4**

55 _____

  A 72 inches
  B 24 inches
  C 12 inches
  D 6 inches

56 Which of these graphs represents the equation $y = \frac{1}{2}x - 2$? **V-1**
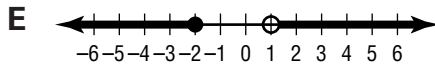
56 _____
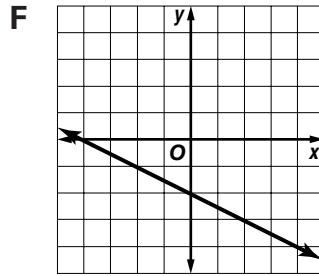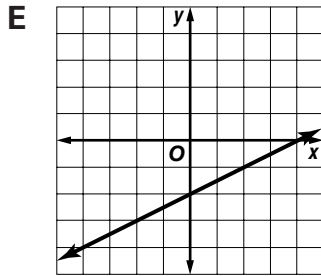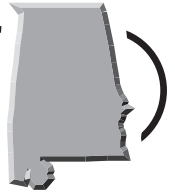
E

F

G

H

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

57 Simplify: $\dfrac{3w}{16} \cdot \dfrac{4w^2}{21}$ **I-3**   57 _____

   A $\dfrac{w^2}{14}$

   B $\dfrac{w^2}{28}$

   C $\dfrac{w^3}{14}$

   D $\dfrac{w^3}{28}$

58 What is the median of this set of data? **VII-5**   58 _____

17.4, 26.2, 20.3, 19.9, 24.8, 23.5, 14.1

   E 21.9

   F 20.3

   G 20.1

   H 19.9

59 What is the area of the parallelogram shown in the diagram below?   59 _____

Use $A = bh$. **IV-1**

5.8 in.   5 in.   7 in.
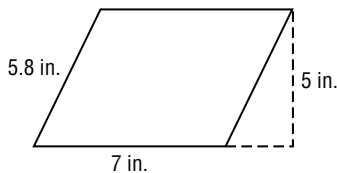
   A 17.5 square inches

   B 29 square inches

   C 35 square inches

   D 40.6 square inches

60 Factor: $5x^2 - 3x - 2$ **I-4**   60 _____

   E $(5x + 1)(x - 2)$

   F $(5x + 2)(x - 1)$

   G $(5x - 1)(x + 1)$

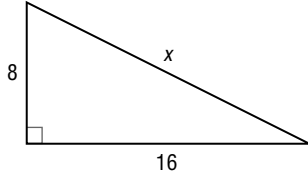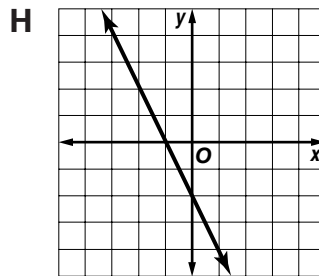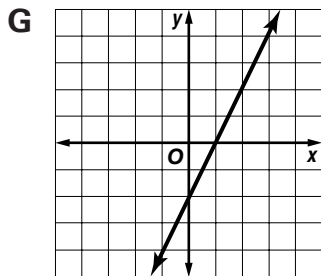   **H** $(5x - 1)(x - 2)$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

61 Which of these graphs represents a function? **III-1**   61 _____

A

B
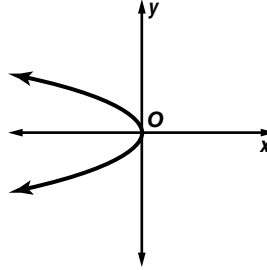
C
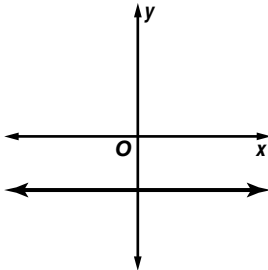
D
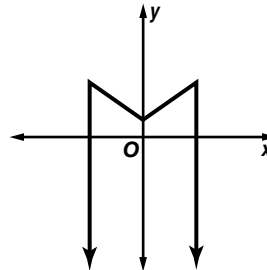
62 What is the range of $y = 2x^2 - 3$ if the domain is $\{-4, 0, 1\}$? **III-2**   62 _____

E $\{-3, -1, 29\}$
F $\{-19, -3, -1\}$
G $\{-32, -3, -1\}$
H $\{-3, -1, 13\}$

63 The endpoints of $\overline{RS}$ are $(5, 3)$ and $(5, -5)$. What are the coordinates of   63 _____
the midpoint of $\overline{RS}$? **IV-2**

Midpoint Formula: $M = \left(\dfrac{x_1 + x_2}{2}, \dfrac{y_1 + y_2}{2} \right)$

A $(0, -4)$
B $(5, -1)$
C $(5, -4)$
D $(0, -1)$

64 Solve: $r(r + 1) - 2(r + 3) = 0$ **II-2**   64 _____

E $\dfrac{1}{2}, -\dfrac{1}{3}$ **F** $3, -2$

G $\dfrac{1}{3}, -\dfrac{1}{2}$ **H** $2, -3$

104 *AHSGE Practice and Sample Test Workbook*
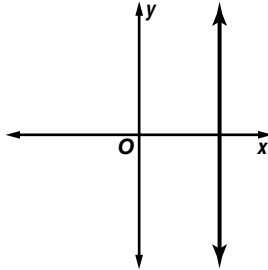
Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

65 There are 18 girls and 12 boys on student council. If two student council   **65** _____
members are selected at random, what is the probability that the first
member is a boy and the second member is a boy? **VII-6**

   A $\dfrac{481}{625}$

   B $\dfrac{144}{625}$

   C $\dfrac{22}{145}$

   D $\dfrac{123}{145}$

66 What is the area of the triangle shown in the diagram below? **IV-1**   **66** _____
Use $A = \dfrac{1}{2}bh$.

5 m

8 m

   E 40 square meters

   F 20 square meters

   G 13 square meters

   H 6.5 square meters

67 A box contains 16 balls—2 purple, 8 green, and 6 red. One ball is   **67** _____
chosen from the box, returned to the box, and then another ball is
chosen. What is the probability that the first ball selected will be purple
and the second ball will be red? **VII-6**

   A $\dfrac{1}{20}$

   B $\dfrac{3}{64}$

   C $\dfrac{19}{20}$

   D $\dfrac{61}{64}$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

68 What is the equation of the line passing through the points $(2, -1)$ and   **68** _____
$(-3, 9)$? **VI-1**

   E $y = -\frac{1}{2}x - 2$

   F $y = -\frac{1}{2}x$

   G $y = -2x + 3$

   H $y = -2x + 5$

69 Which of these is equivalent to $(3xy^5)^2$? **I-3**   **69** _____

   A $9xy^{10}$

   B $9x^2y^{10}$

   C $6x^2y^{10}$

   D $6xy^{10}$

70 What is the equation of the line shown in the graph below? **VI-1**   **70** _____
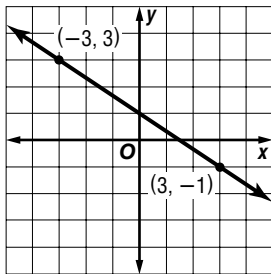
   E $y = \frac{3}{2}x + 1$

   F $y = -\frac{3}{2}x + 1$

   G $y = \frac{2}{3}x + 1$

   H $y = -\frac{2}{3}x + 1$

71 Solve: $4x^2 - 8x = 0$ **II-2**   **71** _____

   A $0, 2$

   B $-2, 0$

   C $2, 4$

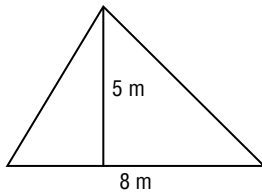   **D** $-2, 4$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

72 Solve: $2n^2 = n + 15$ **II-2**

72 _____

   E $-\frac{5}{2}, 3$

   F $-\frac{5}{2}, \frac{1}{3}$

   G $-\frac{1}{3}, \frac{5}{2}$

   H $-3, \frac{5}{2}$

73 What is the solution of the following system of linear equations? **II-3**

73 _____

$2x + 6y = -10$
$-x - 3y = 5$

   A $\left(-\frac{5}{4}, -\frac{5}{4}\right)$

   B $(5, 0)$

   C   all real numbers

   D   no solution

74 Simplify: $12 \cdot 2^3 \div 4 \cdot (3 + 2)$ **I-1**

74 _____

   E   120

   F   90

   G   74

   H   4.8

75 Solve: $-\frac{3}{4}x > x + 2$ **II-4**

75 _____

   A $x < -\frac{7}{2}$
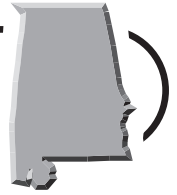
   B $x > -\frac{7}{2}$

   C $x < -\frac{8}{7}$

   D $x > -\frac{8}{7}$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

76 A new savings account was opened with a deposit of $7500. Part of the money earned 3% interest and the remainder earned 4%. The account earned a total of $275 in simple interest during one year. How much money was invested to earn 3% interest? **VII-8**

    E $100   **F** $2500

    G $5000   **G** $7400

76 _____

77 Which of these graphs could be used to find the solution for the following system of equations? **II-3**

$$x + y = 3$$
$$y = x - 1$$

77 _____

A

(−2, 1)

B

(2, −1)

C

(2, 1)

D

(−2, −1)

78 Factor: $x^2 - 6x - 16$ **I-4**

    E $(x + 8)(x + 2)$

    F $(x - 8)(x - 2)$

    G $(x - 8)(x + 2)$

    H $(x + 8)(x - 2)$

78 _____

79 Simplify: $(2a^3)(-b^2) + (-4a^3)(-2b^2)$ **I-3**

    A $10a^3b^2$ **B** $6a^3b^2$

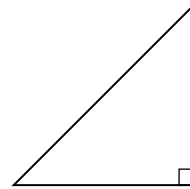   **C** $-6a^3b^2$ **D** $-10a^3b^2$

79 _____

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.
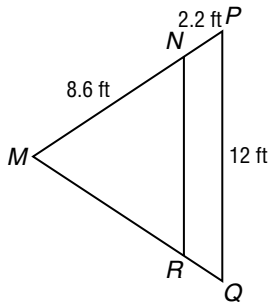
80 Which of these sets of numbers could be the lengths of the sides of a right triangle? **VII-2**

  E {4, 9, 10}
  F {9, 13, 15}
  G {10, 15, 20}
  H {12, 35, 37}

80 _____

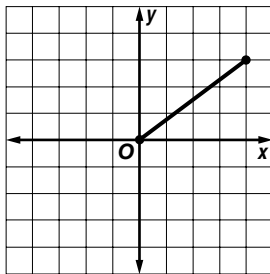**81** In the garden plan shown below, figure *MNR* is similar to figure *MPQ*. **VII-3**

81 _____

2.2 ft *P*
N
8.6 ft
M
12 ft
R
Q

What is the length of segment *NR* rounded to the nearest foot?

  A 3 feet
  B 10 feet
  C 15 feet
  D 47 feet

82 What is the range of the function shown on the graph? **III-2**

82 _____

  E $0 \le y \le 3$
  F $0 \le y \le 4$
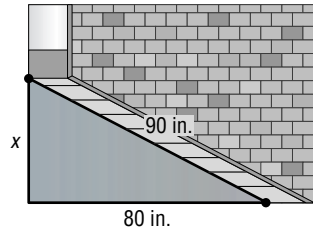 **G** $3 \le y \le 4$
  H $0 \le y \le 7$

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

83 A 90-inch ramp leads from the sidewalk to the door. What is the distance x from the top of the ramp to the ground? **VII-2**

   A 10 inches

   B $10\sqrt{17}$ inches

   C $10\sqrt{145}$ inches
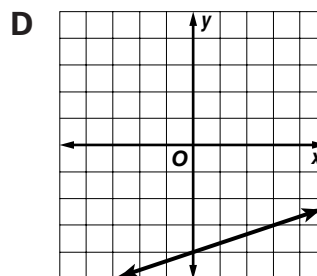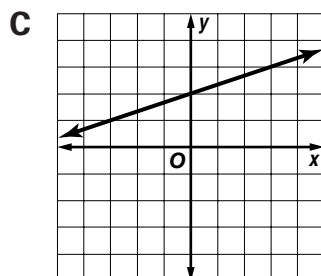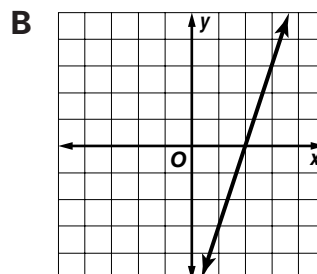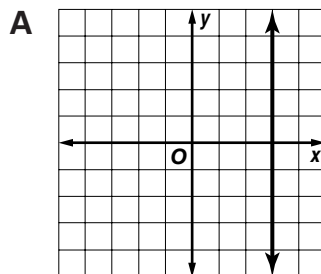
   D $17\sqrt{10}$ inches

83 _____

90 in.

x

80 in.

84 Simplify: $\dfrac{2c^2 - c}{3} + \dfrac{3c^2 + c}{4}$ **I-2**

   E $\dfrac{5c^2}{12}$

   F $\dfrac{17c^2 - 7c}{12}$

   G $\dfrac{17c^2 - c}{12}$

   H $\dfrac{5c^2}{7}$

84 _____

85 Which of these graphs represents a line passing through the points $(3, 3)$ and $(-3, 1)$? **V-2**

85 _____
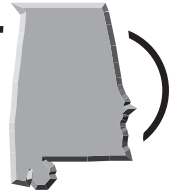
A

B

C

D

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

86 In an equation, y varies directly with x. If $x = 5$ when $y = 12$, what is the value of x when $y = 48$? **VII-7**

    E 4.4
    F 20
    G 52
    H 160

86 _____

87 Solve: $-10 = 5(-v - 1)$ **II-1**

    A $-\dfrac{1}{3}$
    B -1
    C 1
    D 3

87 _____

88 Which of these equations represents this statement? **VI-1**

Five less than $\dfrac{1}{3}$ of a number n is equal to four.

    E $\left(\dfrac{1}{3} - 5\right)x = 4$
    F $\dfrac{1}{3} + n - 5 = 4$
    G $\dfrac{1}{3}(x - 5) = 4$
    H $\dfrac{1}{3}n - 5 = 4$

88 _____

89 What is the solution of the following system of linear equations? **II-3**

$5x + y = 2$
$2x - y = 3$

    A $\left(\dfrac{1}{3}, -\dfrac{7}{3}\right)$
    B $(4, 5)$
    C $\left(\dfrac{5}{7}, -\dfrac{11}{7}\right)$
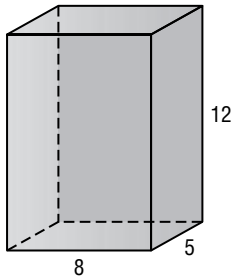   **D** $(2, 1)$

89 _____

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

90 A scale of a map is $\frac{1}{4}$ inch = 50 miles. If two towns are located 4 inches apart on the map, what is the actual distance between them? **VII-7**

  E 100 miles
  F 200 miles
  G 400 miles
  H 800 miles

90 _____
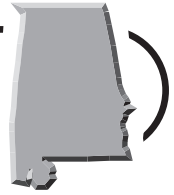
91 What is the total surface area of the rectangular prism shown below? **IV-1**
Use $SA = 2(wh + \ell h + \ell w)$.

  A 52
  B 362
  C 392
  D 480

91 _____

92 Simplify: $7x^2 - 5xy - 8x^2 + 3xy$ **I-2**

  E $-15x^4 - 8x^2y^2$
  F $-x^4 - 2x^2y^2$
  G $-15x^2 - 8xy$
  H $-x^2 - 2xy$

92 _____

93 A circular table top has a circumference of 2π feet. What is the area of the table top? **VII-4**

  A 1 square foot
  B 4 square feet
  C π square feet
  D 4π square feet

93 _____

Sample Test

Test Practice (continued) ————————

Read each question and choose the best answer. Then write the letter for the
answer you have chosen in the blank at the right of each question.

94 What is the mean of this set of data? **VII-5**   94 _____

45, 72, 35, 48, 59, 38, 18, 32

E 45
F 41.5
G 43.375
H 49.6

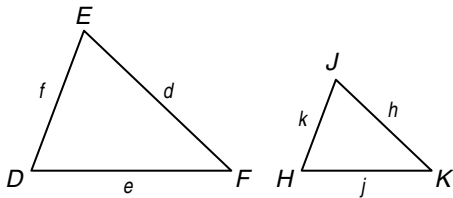**95** What is the distance between $(3, 6)$ and $(-2, -6)$? **IV-2**   95 _____

Distance Formula: $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

A 1
B 6
C 12
D 13

96 If $\triangle DEF \sim \triangle HJK$, which of these proportions is true? **VII-3**   96 _____

E $\dfrac{f}{e} = \dfrac{k}{j}$
F $\dfrac{f}{e} = \dfrac{h}{j}$
G $\dfrac{f}{e} = \dfrac{k}{h}$
H $\dfrac{f}{e} = \dfrac{h}{d}$

97 Brenda is four times as old as Trina. The sum of their ages is 40. How   97 _____
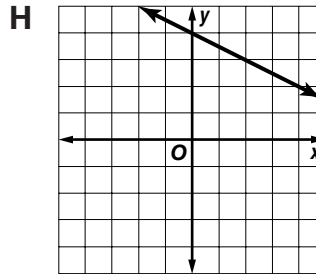old is Brenda? **VII-8**

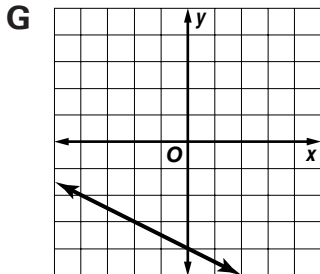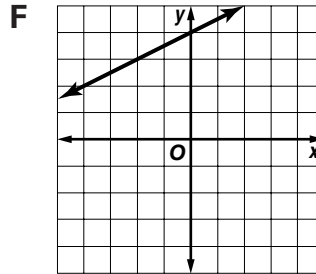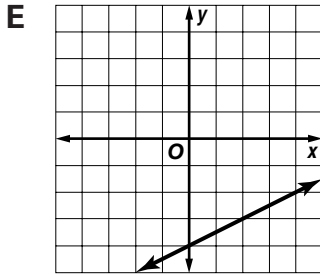**A** 32
B 22
C 8
D 5

Sample Test

Test Practice (continued)

Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

98 Which of these graphs represents a line that has a slope of $-\frac{1}{2}$ and a *y*-intercept of 4? **V-2**

98 _____

E

F

G

H

99 Which of these dimensions form a rectangle similar to a rectangle with a width of 5 meters and a length of 15 meters? **VII-3**

99 _____

A 1 meter by 3 meters
B 3 meters by 13 meters
C 10 meters by 20 meters
D 12 meters by 22 meters

100 A walker can walk 2 miles in 40 minutes. At this rate, how long will it take to walk 5 miles? **VII-7**

100 _____

E 60 minutes
F 80 minutes
G 90 minutes
H 100 minutes