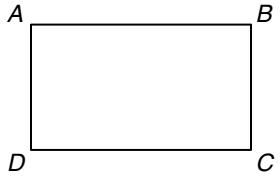
Name Date

Sample Test

Test Practice

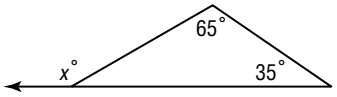
Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

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 $5(x - 1)(x - 1)$

Name Date

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: $\frac{x-3}{4} = \frac{2x-1}{5}$ **II-1** **5** _____

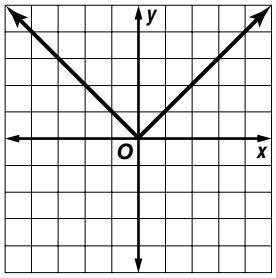
A $-\frac{19}{3}$

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

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

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

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 $y = \frac{1}{2}x + 9$

C $y = 2x + 6$

D $y = 4x + 2$

Name Date

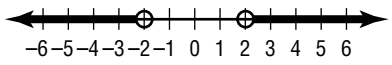
Sample Test

Test Practice (continued)

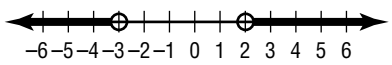
Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

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

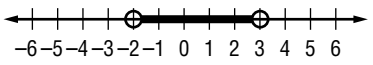
E



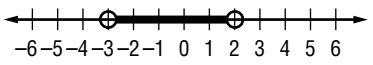
F



G



H



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

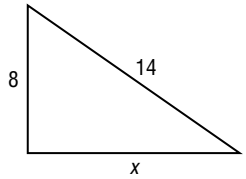
A $-5w - 5z$
B $3w - 5z$
C $3w + z$
D $4w - 5z$

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

Name Date

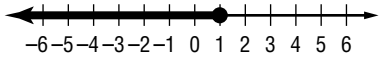
Sample Test

Test Practice (continued)

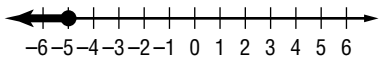
Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

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

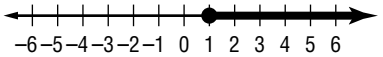
E



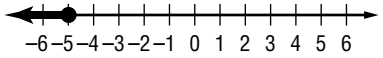
F



G



H



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

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

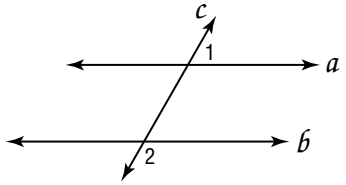
A $\left(\frac{5}{3}, \frac{10}{3}\right)$

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

Name Date

Sample Test

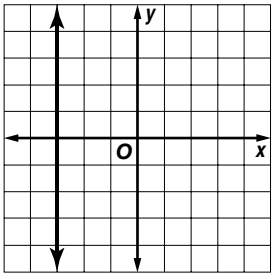
Test Practice (continued)

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** **16** _____

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

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



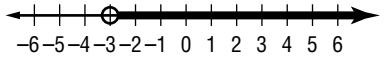
A $y = -3$ **B** $y = -x$
C $y = x$ **D** $x = -3$

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** **18** _____

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

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

A


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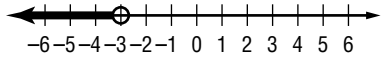
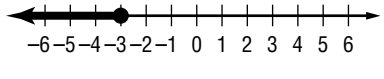
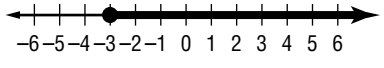


C


D


Name Date

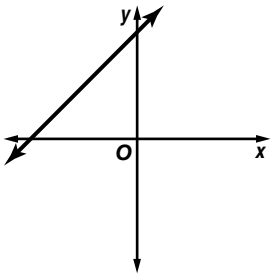
Sample Test

Test Practice (continued)

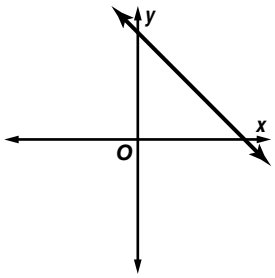
Read each question and choose the best answer. Then write the letter for the answer you have chosen in the blank at the right of each question.

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

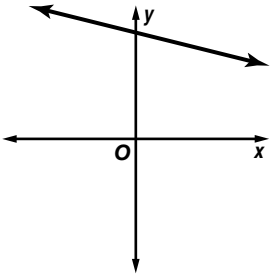
E



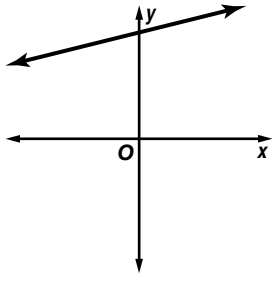
F



G



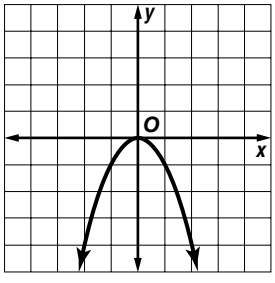
H



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