Name _____   Date _____

Reporting Category 4 (A.7.B.)

1. Auto-Check Motors charged Mr. Jones $84.00 for an automotive part plus $68.00 per hour that a mechanic worked to install the part. The total charge was $353.00. For about how long did the mechanic work to install the part on Mr. Jones's car?
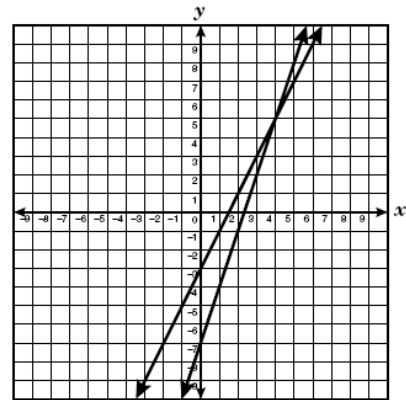
F 6 h

G 5 h

H 4 h

J 3 h

2. If $(x, -4)$ is a solution to the equation $4x - 5y = 8$, what is the value of x?

A −4.8

B −3

C 1.6

D 7

3. The graphs of the linear equations $y = 2x - 3$ and $y = 3x - 7$ are shown below.

If $2x - 3 = 3x - 7$, what is the value of x?

F 4

G 5

H 9

J 10

4. If $(x, -3.2)$ is a solution to the equation $4x = 5y - 17$, what is the value of x?

F 0.84

G 0.25

H −5.96

J −8.25

Name _____   Date _____

Reporting Category 4 (A.7.B.)

5. If (–7, y) is a solution to the equation $2x - 7y - 42 = 0$, what is the value of y?

A   –4
B   –8
C   –3.5
D   –6.7

6. In the equation $6.5x + 1.4y = 59$, what is the value of x when $y = 5$?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

7. What is the value of y if (3, y) is a solution to the equation $5x - 3y = 18$?

F   3
G   1
H   –1
J   –11

8. The length of each leg of an isosceles triangle is 5 centimeters more than twice the length of the base. If the perimeter of this isosceles triangle is 95 centimeters, what is the length of the base?
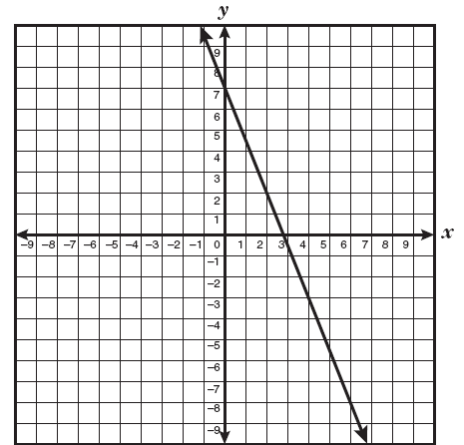
A   17 cm
B   21 cm
C   30 cm
D   39 cm

Reporting Category 4 (A.7.B.)

9. The graph of the linear equation $y = -\dfrac{5}{2}x + 7$ is shown below.

Which coordinate pair is in the solution set of $y < -\dfrac{5}{2}x + 7$?

A (4, −3)
B (1, 2)
C (5, 6)
D (0, 7)

10. For what value of x is $(x, -3)$ a solution for $4x - 3y = 21$?

A 11
B −3
C −11
D 3

11. Anna makes hand-painted plates. Her overhead costs are $750 per week, and she pays an additional
$10 per plate in material costs. If Anna sells the plates for $25 each, how many plates does she have to sell each week before she can make a profit?

A 20
B 30
C 50
D 75

12. Ms. Barton determined that the total cost of her wedding, c, could be represented by the equation
$c = 75n + 1500$, where n is the number of people attending the wedding. If Ms. Barton's wedding cost $8625, how many people attended the wedding?
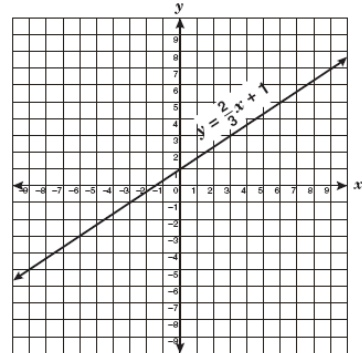
F 135
G 95
H 115
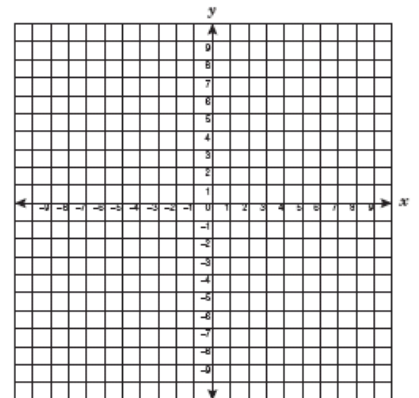**J** 75

Name _____   Date _____

Reporting Category 4 (A.7.B.)

13. Use the graph of $y = \dfrac{2}{3}x + 1$ to solve the equation for x when $y = -3$.

F $x = -6$
G $x = -1$
H $x = 1$
J $x = 3$

14. Use the grid to graph $y \geq x - 2$.

Which coordinate point represents a solution of this inequality?

A $(4, 0)$
B $(-3, -5)$
C $(7, 2)$
D $(-2, 3)$

15. The equation $F = \dfrac{9}{5}C + 32$ represents the relationship between F, the temperature in degrees Fahrenheit, and C, the temperature in degrees Celsius. If the temperature is 104°F, what is the temperature in degrees Celsius?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

Name _____   Date _____

16. If $(5\frac{1}{3}$, $y)$ is a solution to the equation $5x - 4y - 20 = 0$,

what is the value of y?

F $-11\frac{2}{3}$ **H** $\frac{4}{15}$

G $8\frac{4}{15}$ **J** $1\frac{2}{3}$

17. The graph of $-x + 5y = 9$ is shown below.
Which point represents a solution to this equation?

A $(0, 1)$
B $(2, 1)$
C $(1, 2)$
D $(-7, 0)$