

Name \_\_\_\_\_

1 Which expression is equivalent to  $2(3g - 4) - (8g + 3)$ ?

- (1)  $-2g - 1$                       (3)  $-2g - 7$
- (2)  $-2g - 5$                       (4)  $-2g - 11$

2 A car leaves Albany, NY, and travels west toward Buffalo, NY. The equation  $D = 280 - 59t$  can be used to represent the distance,  $D$ , from Buffalo after  $t$  hours. In this equation, the 59 represents the

- (1) car's distance from Albany
- (2) speed of the car
- (3) distance between Buffalo and Albany
- (4) number of hours driving

3 Faith wants to use the formula  $C(f) = \frac{5}{9}(f - 32)$  to convert degrees Fahrenheit,  $f$ , to degrees Celsius,  $C(f)$ . If Faith calculated  $C(68)$ , what would her result be?

- (1)  $20^\circ$  Celsius                      (3)  $154^\circ$  Celsius
- (2)  $20^\circ$  Fahrenheit                      (4)  $154^\circ$  Fahrenheit

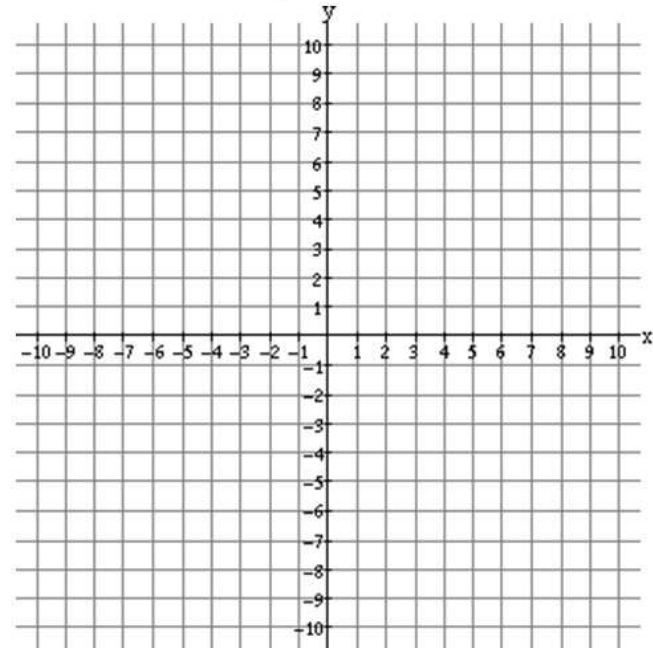
4 What type of relationship exists between the number of pages printed on a printer and the amount of ink used by that printer?

- (1) positive correlation, but not causal
- (2) positive correlation, and causal
- (3) negative correlation, but not causal
- (4) negative correlation, and causal

5 Solve the inequality below:

$$1.8 - 0.4y \geq 2.2 - 2y$$

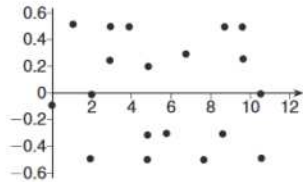
6 Graph the inequality  $y > 2x - 5$  on the set of axes below. State the coordinates of a point in its solution.



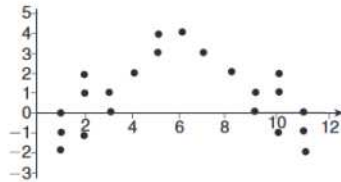
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**7** Determine the smallest integer that makes  $-3x + 7 - 5x < 15$  true.

**8** The residual plots from two different sets of bivariate data are graphed below.



Graph A



Graph B

Explain, using evidence from graph A and graph B, which graph indicates that the model for the data is a good fit.

**9** Given the graph of the line represented by the equation  $f(x) = -2x + b$ , if  $b$  is increased by 4 units, the graph of the new line would be shifted 4 units

- (1) right
- (2) up
- (3) left
- (4) down

**10** Rowan has \$50 in a savings jar and is putting in \$5 every week. Jonah has \$10 in his own jar and is putting in \$15 every week. Each of them plots his progress on a graph with time on the horizontal axis and amount in the jar on the vertical axis. Which statement about their graphs is true?

- (1) Rowan's graph has a steeper slope than Jonah's.
- (2) Rowan's graph always lies above Jonah's.
- (3) Jonah's graph has a steeper slope than Rowan's.
- (4) Jonah's graph always lies above Rowan's.

**11** To watch a varsity basketball game, spectators must buy a ticket at the door. The cost of an adult ticket is \$3.00 and the cost of a student ticket is \$1.50. If the number of adult tickets sold is represented by  $a$  and student tickets sold by  $s$ , which expression represents the amount of money collected at the door from the ticket sales?

- (1)  $4.50as$
- (2)  $4.50(a + s)$
- (3)  $(3.00a)(1.50s)$
- (4)  $3.00a + 1.50s$

**12** Last week, a candle store received \$355.60 for selling 20 candles. Small candles sell for \$10.98 and large candles sell for \$27.98. How many large candles did the store sell?

- (1) 6
- (2) 8
- (3) 10
- (4) 12