

Name _____

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Reporting Category 2 (A.4.A)

1. The area of a rectangle is given by the equation $2L^2 - 5L = 18$, in which L is the rectangle's length. What is the length of the rectangle?

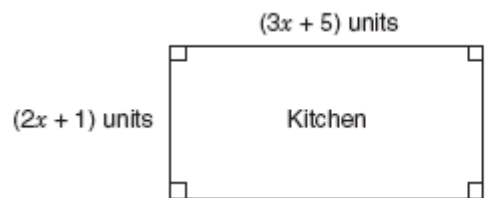
- F 1.5
- G 2
- H 4.5
- J 6

2. The area of a rectangle is $3x^2 + 14x + 8$, and the width is $x + 4$. Which expression best describes the rectangle's length?

- F $3x + 2$
- G $2x + 4$
- H $2x + 2$
- J $3x - 2$

3. Tammy drew a floor plan for her kitchen, as shown below. Which expression represents the area of Tammy's kitchen floor in square units?

- F $6x^2 + 30x + 5$
- G $6x^2 + 13x + 5$
- H $10x + 12$
- J $5x + 6$



4. Given the function $f(x) = 3x^2 - 7$, what is the value of $f(-3)$?

- A -25
- B -34
- C 74
- D 20

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5. A quadratic function is given. $f(x) = 3x^2 - x + 6$ What is $f(2)$?

- F 40
- G 28
- H 16
- J 4

6. In the equation $y = 2x^2 - 5x - 18$, which is a value of x when $y = 0$?

- A -18
- B $1\frac{1}{2}$
- C 2
- D $4\frac{1}{2}$

7. After a ball is dropped, the rebound height of each bounce decreases. The equation $y = 5(0.8)^x$ shows the relationship between x , the number of bounces, and y , the height of the bounce, for a certain ball. What is the approximate height of the fifth bounce of this ball to the nearest tenth of a unit?

- A 20.0 units
- B 4.0 units
- C 1.6 units
- D 1.3 units

8. A rectangle has a length of $2x + 1$ and a width of $5x - 4$. Which expression best describes the area of the rectangle?

- F $7x - 3$
- G $14x - 6$
- H $10x^2 - 3x - 4$
- J $10x^2 + 13x - 4$

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9. Solve the equation $2a - 6 + 5a = 3a + 10$ for a .

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

				.			
0	0	0	0		0	0	0
1	1	1	1		1	1	1
2	2	2	2		2	2	2
3	3	3	3		3	3	3
4	4	4	4		4	4	4
5	5	5	5		5	5	5
6	6	6	6		6	6	6
7	7	7	7		7	7	7
8	8	8	8		8	8	8
9	9	9	9		9	9	9

10. If $(-3.5, y)$ is a solution to the equation $2x - 5y = 10$, what is the value of y ?

- F -3.4
- G 13.75
- H -0.6
- J -3.75

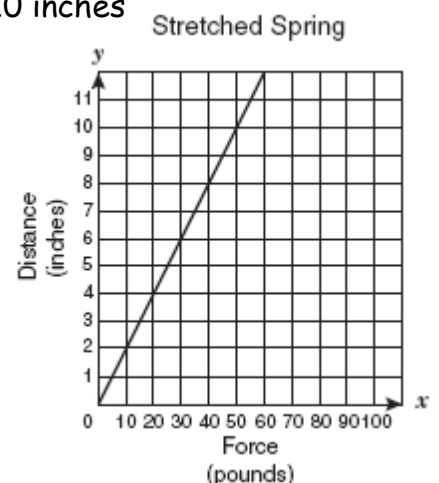
18) Which of the following is equivalent to $2x - 3y \geq 9$?

- F $y \geq \frac{3}{2}x + 3$
- G $y \leq \frac{2}{3}x - 3$
- H $y \geq \frac{2}{3}x - 3$
- J $y \leq \frac{3}{2}x + 3$

19. The graph below shows the amount of force needed to stretch a certain spring to various distances.

Which of the following best represents the difference between the amount of force in pounds needed to stretch the spring to 10 inches and the amount needed to stretch it to 4 inches?

- F 6
- G 14
- H 30
- J 70



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20. A function is described by the equation $y = 2x^2 - 5x - 3$, in which y is dependent on x . If a value for the independent variable is selected from the set $\{-4, -1, 0, 2, 5\}$, which of the following is a corresponding dependent value?

- A 9
- B -6
- C -5
- D 0

21. Simplify the algebraic expression $3(x + 3) - 2(x + 3)$.

- F $x + 3$
- G $x - 3$
- H $-6x^2 - 54$
- J $6x^2 + 3$

22. Which expression is equivalent to $-7(x - 2) + 5(3 - x) - 4x$?

- F $-16x + 1$
- G $-16x + 29$
- H $-2x + 1$
- J $-12x + 13$

23. Simplify the expression $3(x + 1) - 2(3x + 7)$.

- F $-3x - 11$
- G $-3x - 10$
- H $-3x - 8$
- J $-3x + 17$

24. Simplify the algebraic expression $5(x + 3)(x + 2) - 3(x^2 + 2x + 1)$.

- A $2x^2 + 7$
- B $2x^2 + 27$
- C $2x^2 + 7x + 7$
- D $2x^2 + 19x + 27$