Name _____ **Date** _____

8 Algebra CC – Spiral Set D

Part I. Multiple Choice. Place the answers to the questions in the boxes below.

1.	2.	3.	4.	5.	6.	7.

1. Which expression is equivalent to $(3x^5 + 8x^3) - (7x^2 - 6x^3)$?

   (1) $-4x^3 + 14$ (3) $-4x^5 + 14x^3$

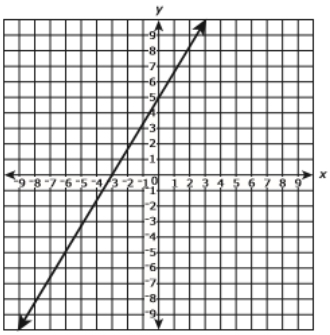
   (2) $3x^5 + 14x^3 - 7x^2$ (4) $3x^5 + 2x^3 - 7x^2$

2. If $(-4, k)$ is a point on the graph of the equation $3x + y = -8$, find the value of k.

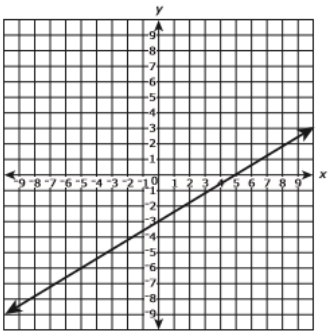
   (1) -20 (2) -4 (3) 0 (4) 4

3. Which graph represents the equation $5y - 3x = -15$?

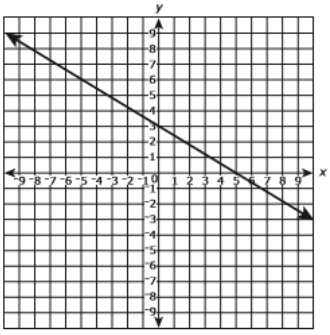
(1)



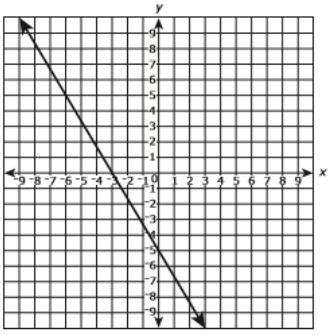
(3)



(2)



(4)



4. Which expression is equivalent to $(x + 3)^2$?

   (1) $x^2 + 6$ (3) $x^2 + 9$

   (2) $x^2 + 6x + 9$ (4) $x^2 + 3x + 9$

5. Given the domain {0, 1, 2, 3, 4, 5, 6}, what is the solution set for the compound inequality $x < 3 \vee x \geq 5$?

   (1) { } (2) {0,1,2,5,6} (3) {0,1,2,3,5,6} (4) {4,5}

6. What is the largest *integer* that makes the statement $2x - 3 \leq 6$ true?

   (1) 4.5 (3) 3

   (2) 5 (4) 4

7. Which equation represents the graph of a line parallel to the *y*-axis and 1 unit to the right of it?

   (1) $x = -1$ (2) $x = 1$ (3) $y = 1$ (4) $y = -1$

Extended Response: Show all work.

8. A high school is having a talent contest and will award prize money for the best 4 acts in the show. First place wins the most money, and each place after that wins $50 less than the previous place. The talent contest has a total of $1,000 in prize money. What is the amount of prize money awarded to each place? *Only an algebraic solution will be accepted.*

9. Solve for *x* in $ax^2 - b = c$

10. Jerome is constructing a table of values that satisfies the definition of a function.

Input	−13	20	0	−4	11	−1	17	
Output	−15	−11	−9	−2	−1	5	5	13

Which numbers can be placed in the empty cell so that the table of values satisfies the definition of a function? Circle all that apply.

A. -5 B. -1 C. 0 D. 2 E. 11 F. 17