M3 Functions Review

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1. Which of the following equations has a domain of all real numbers and a range where $y \leq 1$?

A. $y = -2(x-3)^2 - 1$

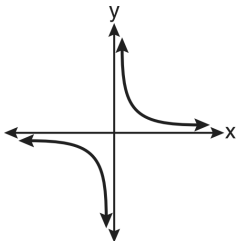
B. $y = -2(x-3)^2 + 1$

C. $y = 2(x-3)^2 - 1$

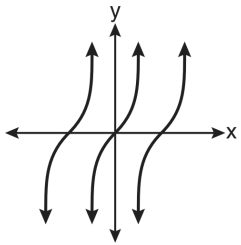
D. $y = 2(x-3)^2 + 1$

2. Which graph represents a relation that is *not* a function?

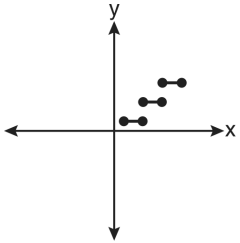
A.



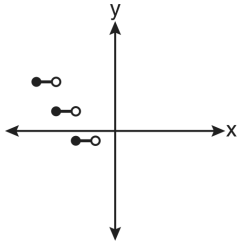
B.



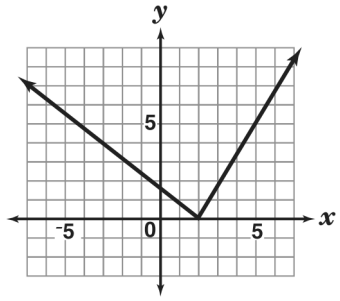
C.



D.



3. Look at the function that is graphed below.



Which of these describes the range of this function?

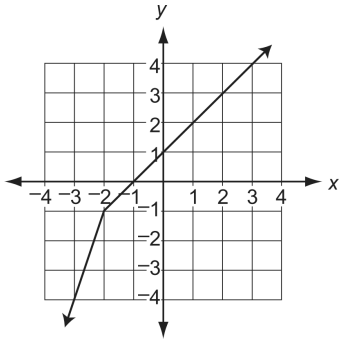
A. $y \geq 0$

B. $0 \leq y \leq 5$

C. all real numbers

D. all whole numbers

4. Use the graph of the function below to answer the question.



Which description of the function is true?

A. The function is linear and always increasing.

B. The function is nonlinear and always increasing.

C. The function is decreasing from negative infinity to −1 and increasing from −1 to infinity.

D. The function is decreasing from negative infinity to −2 and increasing from −2 to infinity.

5. Which function has zeros at 3 and –5 with a multiplicity of 2?

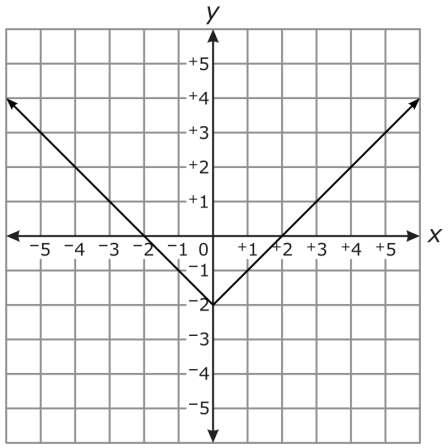
A. $y = x^2 + 2x - 15$

B. $y = x^2 - 2x - 15$

C. $y = x^3 + 7x^2 - 5x - 75$

D. $y = x^3 - 7x^2 - 5x + 75$

6. Which choice *best* describes the part of the graph from $x = -2$ to $x = 0$?



A. nonlinear and decreasing

B. linear and increasing

C. linear and decreasing

7. In which direction does the graph of $y = \sqrt{x + a}$ shift as the value of a decreases?

A. upward

B. downward

C. to the right

D. to the left

M3 Functions Review 10/21/2014

1.
Answer: B
Objective: F.IF.01

2.
Answer: C

3.
Answer: A

4.
Answer: B

5.
Answer: C

6.
Answer: C

7.
Answer: C