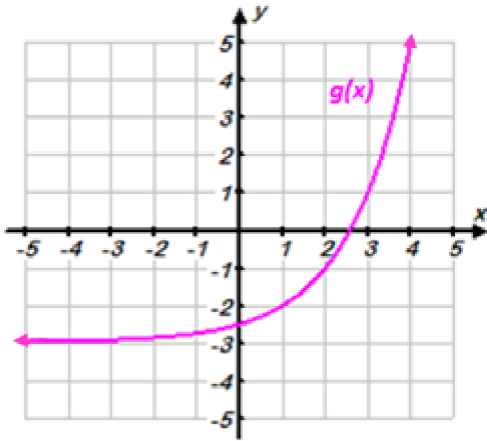


Unit 06-08 - Function Characteristics**Multiple Choice**

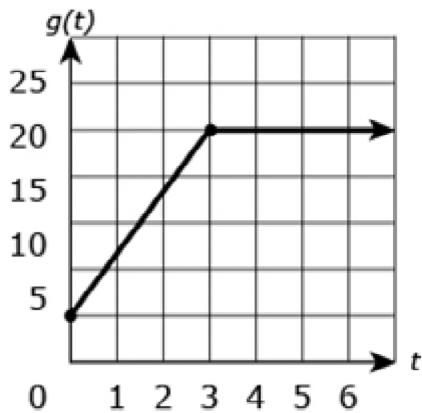
Identify the choice that best completes the statement or answers the question.

- _____ 1. Given $f(x)$ is graphed below. What is the **RANGE** of $g(x)$?



- | | |
|------------------|--------------------------------------|
| a. $g(x) \leq 4$ | c. $x \leq 2.5$ |
| b. $g(x) > -3$ | d. All Real Numbers $\{\mathbb{R}\}$ |

- _____ 2. Given $g(t)$ is graphed below. What is most likely the **DOMAIN** of $g(t)$?



- | | |
|--------------------------|------------------|
| a. $5 \leq t \leq 20$ | c. $t \geq 0$ |
| b. $5 \leq g(t) \leq 20$ | d. $g(t) \geq 0$ |

Name: _____

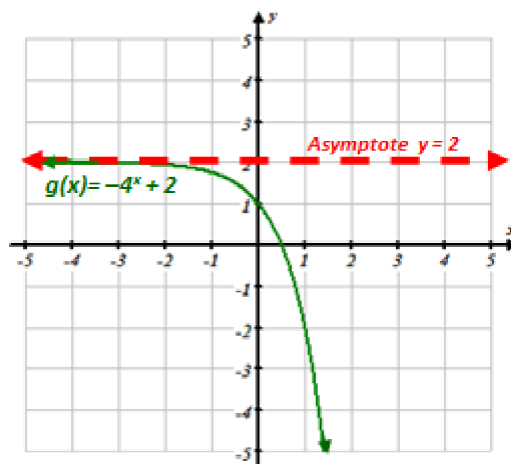
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_____ 3.

The function, $g(x) = -4^x + 2$, is graphed at the right.

As $x \rightarrow \infty$, determine $g(x) \rightarrow$ _____

(i.e. As x approaches infinity what does $g(x)$ approach?)



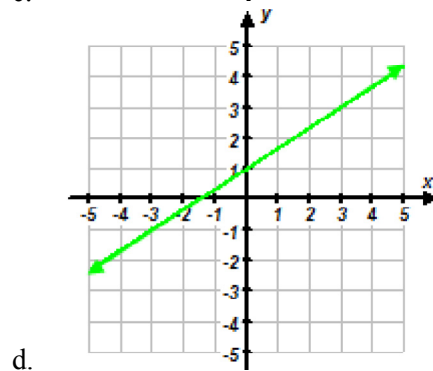
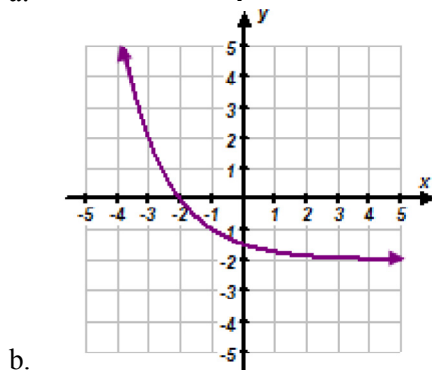
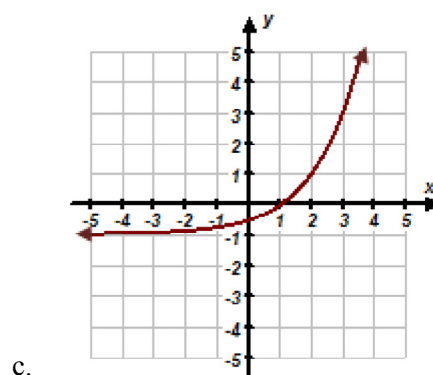
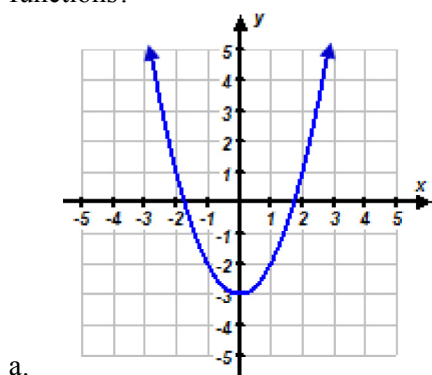
a. $g(x) \rightarrow -\infty$

b. $g(x) \rightarrow \infty$

c. $g(x) \rightarrow -4$

d. $g(x) \rightarrow 2$

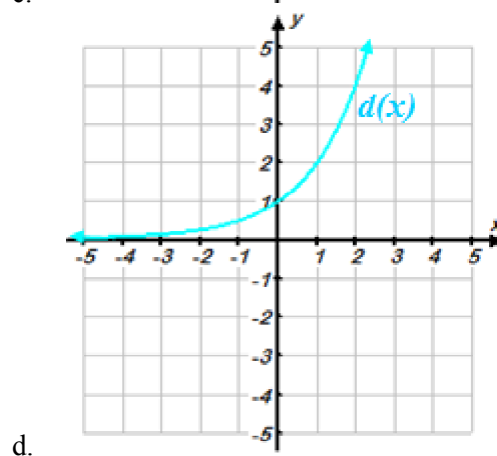
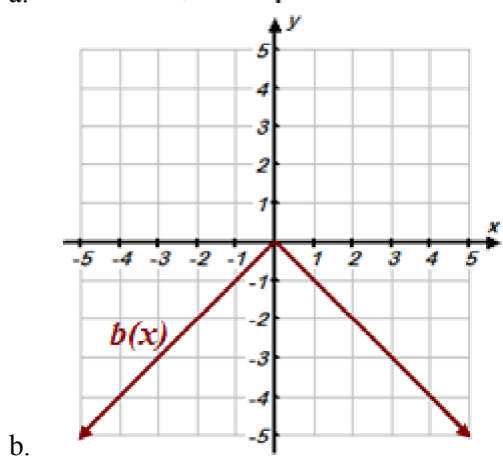
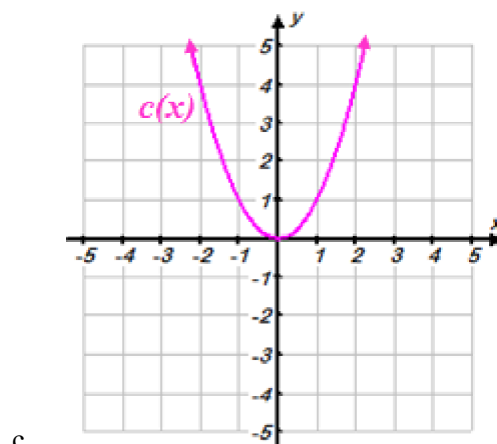
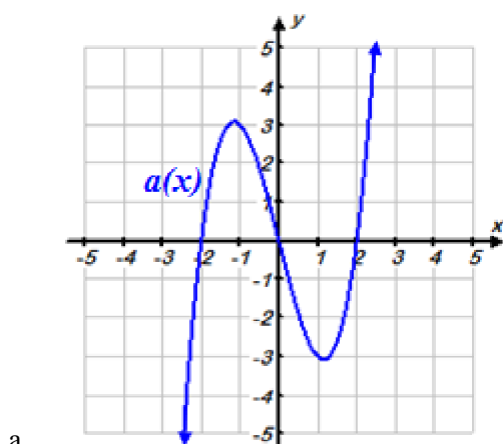
_____ 4. Which is the only function graphed below that has a different end behavior for $x \rightarrow \infty$ than the other functions?



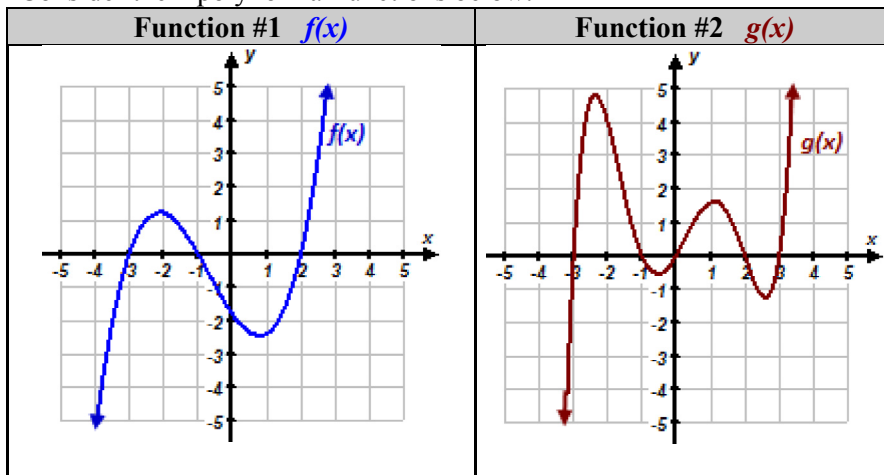
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____ 5. Which function graphed below is an **ODD** function?



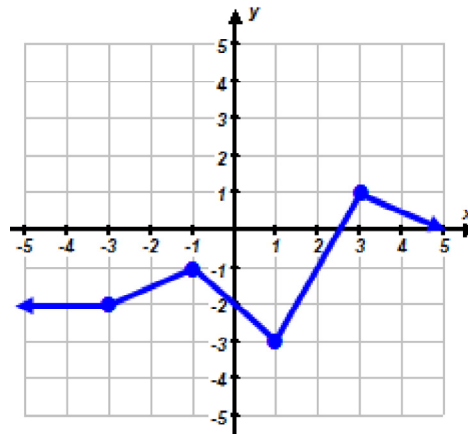
8. Consider the 2 polynomial functions below.



Which comparison of the two functions is the most accurate?

- Both functions have the same **y - intercept**.
- Both functions have the same **number of local maximums**.
- Both functions have the same **number of zeros**
- Both functions have the same **end behavior**.

9. During which interval is the following function increasing at the greatest average rate?



- $(-4, -3)$
- $(-3, -1)$
- $(-1, 1)$
- $(1, 3)$

10. Which function below has the **greatest average rate of change** from $x = 0$ to $x = 1$?

- $a(x) = -2^x$
- $b(x) = 2^x + 3$
- $c(x) = -3^x + 2$
- $d(x) = 3^x - 2$