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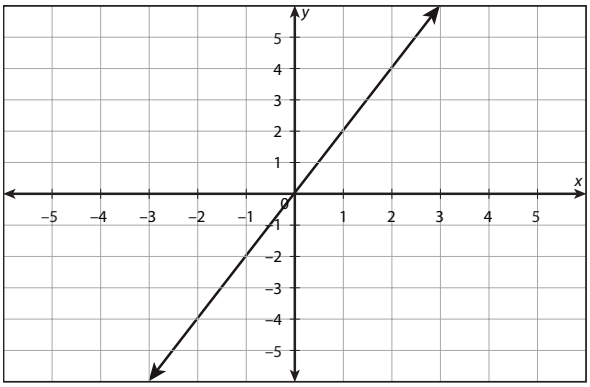
Practice: Comparing Models B

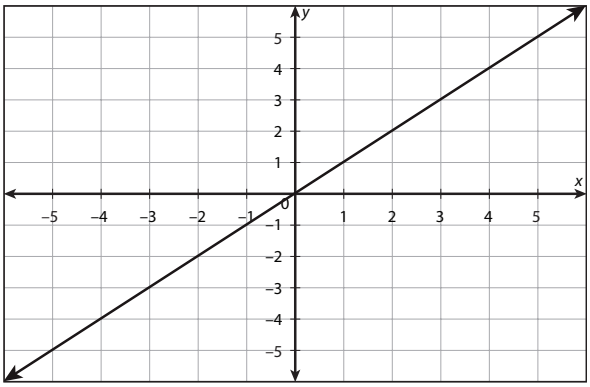
Use the given information to solve each problem.

1. Which of the following has a greater slope?

Graph A



Graph B



2. Khushboo is selling flowers in her neighborhood. Her first option is to sell them for $5 apiece. Her second option is to sell them according to the function $y = x^2$, where x is the number of flowers sold. Which of these options has a constant slope?

3. Neil wants to go on a cruise. The first cruise costs $300 to board, and $100 per night. The second cruise costs $100 to board, and $200 per night. Which situation yields a function with a greater y-intercept?

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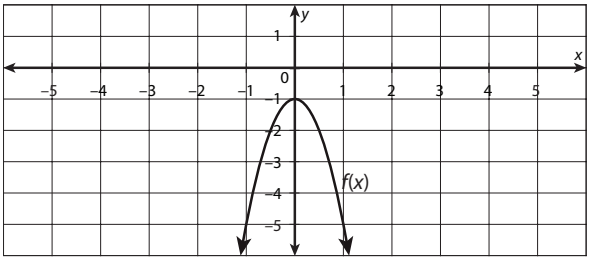
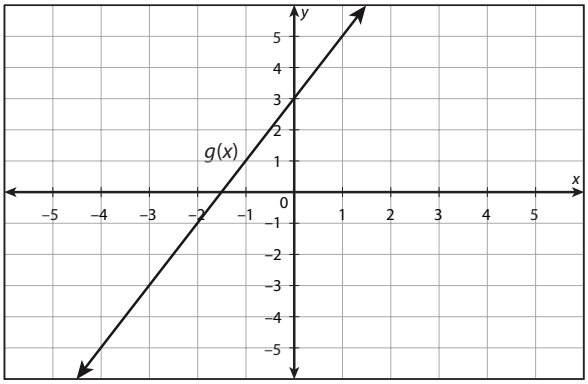
4. Which of the following functions match the graphs?





a. $f(x) = -4x - 1$, $g(x) = 2x^2 + 3$

b. $f(x) = 2x + 3$, $g(x) = -4x^2 - 1$

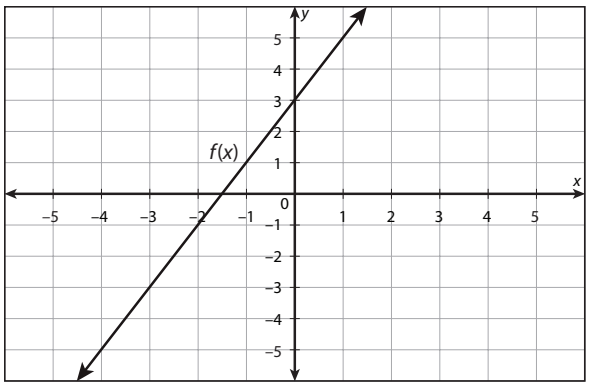
c. $f(x) = -4x^2 - 1$, $g(x) = 2x + 3$

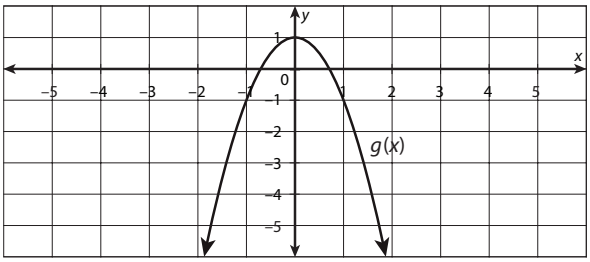
d. $f(x) = -2x^2 + 3$, $g(x) = -4x - 1$

5. In 1985, the number of tourists that visited Hickory County is given by the following table (in 3-month increments). The number of tourists in 1990 can be modeled by the function $y = 42x^2$. Determine whether the equation or the table represents a greater increase in the last 3-month increment.

x	1	2	3	4
y	82	164	328	656

6. Using the following graphs, determine which function is greater at $x = 2$.





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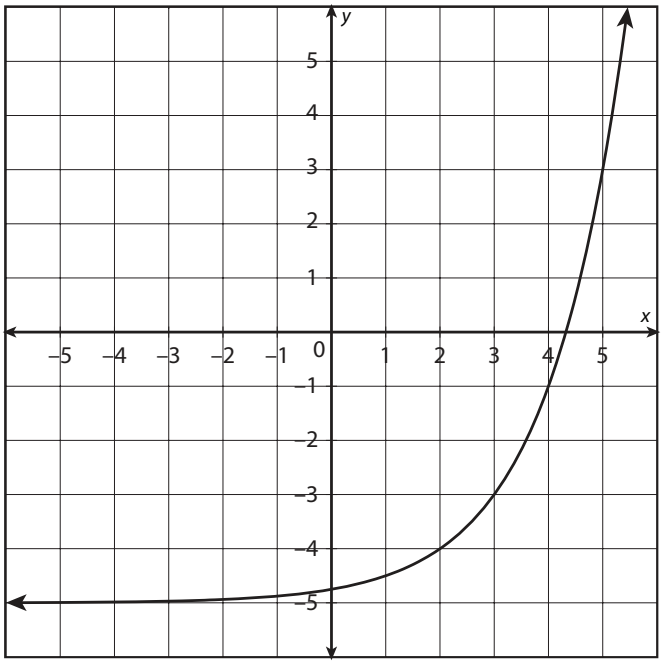
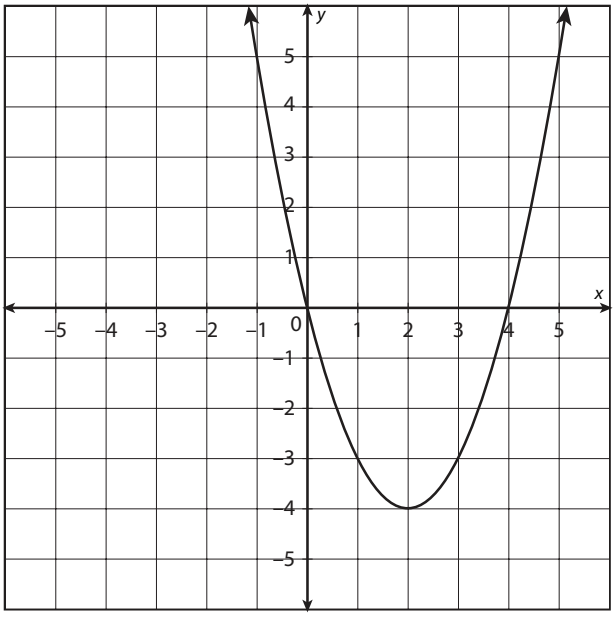
7. Using the following table and graph, determine which is greater when $x = 5$.

x	y
3	1
6	2
9	3
12	4



8. Determine whether the following equation or graph has a greater rate of change from $x = 4$ to $x = 5$.

$y = 2x^2 + 4$



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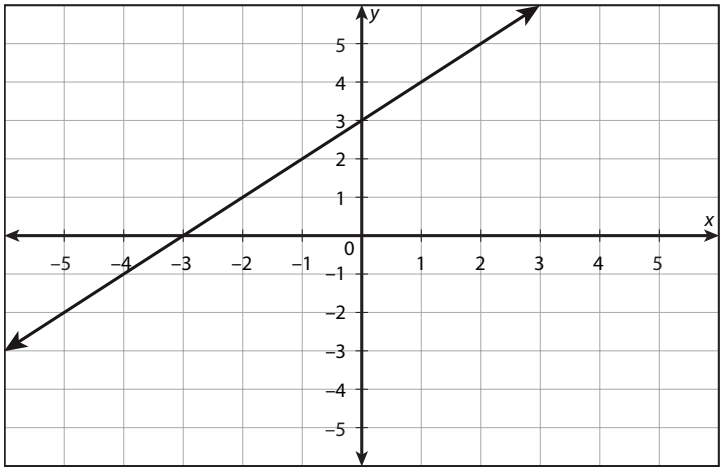
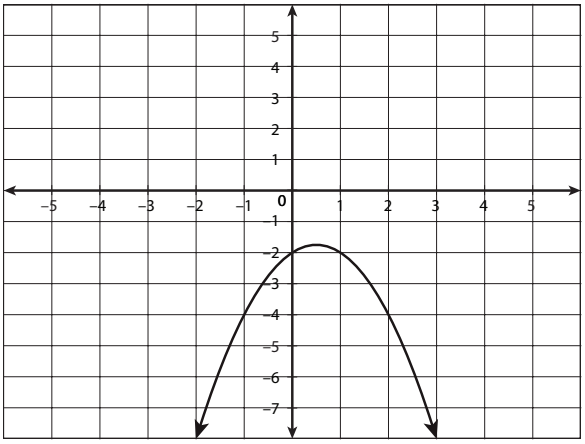
9. Determine whether the following graph or equation is greater when $x = 2$.

$y = 3^x$



10. Let $f(x) = -x^2 + x - 2$ and $g(x) = \frac{1}{9}3^x - 4$. Match each function with the following graphs:

Graph A



Graph B