

Lesson 6 Practice Problems

1. Classify each function as odd, even, or neither.

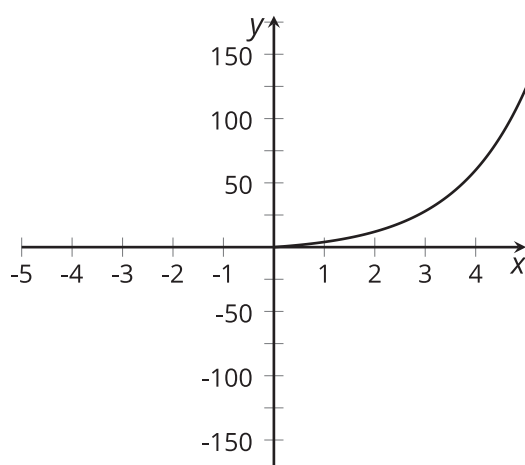
a. $f(x) = 3x^4 + 3$

b. $f(x) = x^3 - 4x$

c. $f(x) = \frac{1}{x^2+1}$

d. $f(x) = x^2 + x - 3$

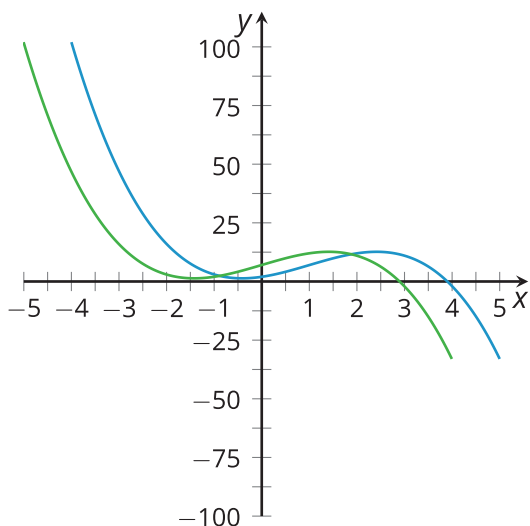
2. Here is a graph of a function f for $0 \leq x \leq 5$.



- a. The function g is even and takes the same values as f for $0 \leq x \leq 5$. Sketch a graph of g .
- b. The function h is odd and takes the same values as f for $0 \leq x \leq 5$. Sketch a graph of h .

3. The linear function f is given by $f(x) = mx + b$. If f is even, what can you conclude about m and b ?

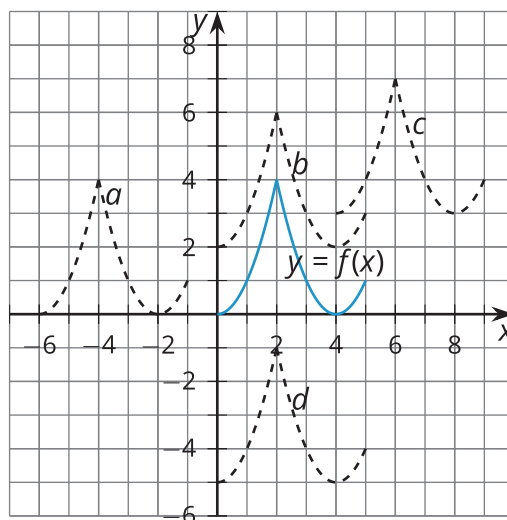
4. Here are the graphs of $y = f(x)$ and $y = f(x - 1)$ for a function f .



Which graph corresponds to each equation? Explain how you know.

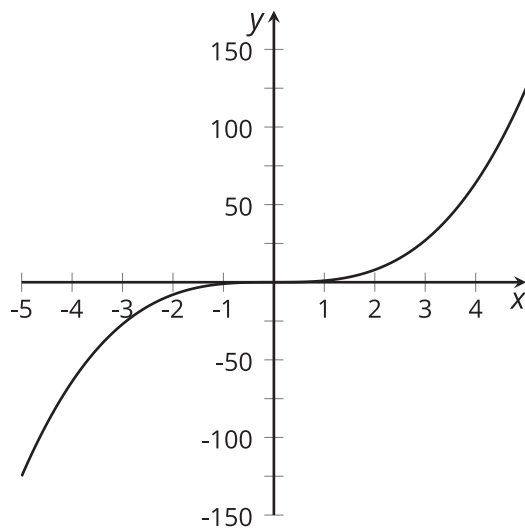
(From Unit 5, Lesson 2.)

5. Write an expression for two of the graphs in terms of $f(x)$.



(From Unit 5, Lesson 3.)

6. Here is a graph of the function f given by $f(x) = x^3$.



(From Unit 5, Lesson 5.)

- a. What happens if you reflect the graph across the x -axis and then across the y -axis?
- b. Is f even, odd, or neither?