## Lesson 5 Practice Problems

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

2. The table shows the values of an even function $f$ for some inputs.

| $x$ | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $f(x)$ | 2 |  | 8 |  | 10 | -1 |  | 0 |  |

Complete the table.
3. Here is the graph of $y=x-2$.

a. Is there a vertical translation of the graph that represents an even function? Explain your reasoning.
b. Is there a vertical translation of the graph that represents an odd function? Explain you reasoning.
4. The function $f$ is odd. Which statements must be true? Select all that apply.
A. If $f(5)=2$, then $f(-5)=2$.
B. If $f(5)=3$, then $f(-5)=-3$.
C. Reflection over the $y$-axis takes the graph of $f$ to itself.
D. Reflecting $f$ across both axes takes the graph of $f$ to itself.
E. $f(0)=0$
5. Find the exact solution(s) to each of these equations, or explain why there is no solution.
a. $\frac{1}{4} \sqrt[3]{d}=15$
b. $-\sqrt[3]{e}=7$
c. $\sqrt[3]{f-5}+2=4$
(From Unit 3, Lesson 8.)
6. Here is the graph of $f$.
a. Graph the function $g$ given by $g(x)=-f(x)$.
b. Graph the function $h$ given by $h(x)=f(-x)$.

(From Unit 5, Lesson 4.)
7. The graph models Priya's heart rate before, during, and after a run.

a. What was Priya's approximate heart rate before and after the run?
b. About how high did Priya's heart rate get during the run?
c. Sketch what the graph would look like if Priya went for the run three hours later.
(From Unit 5, Lesson 2.)

