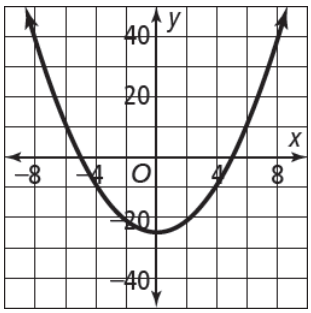
1.1-1.3 Quiz Review Name: _____

For Items 1–2, identify the following information for the function of each graph:

1.



Domain:

Range:

x-intercepts:

y-intercepts:

Interval positive:

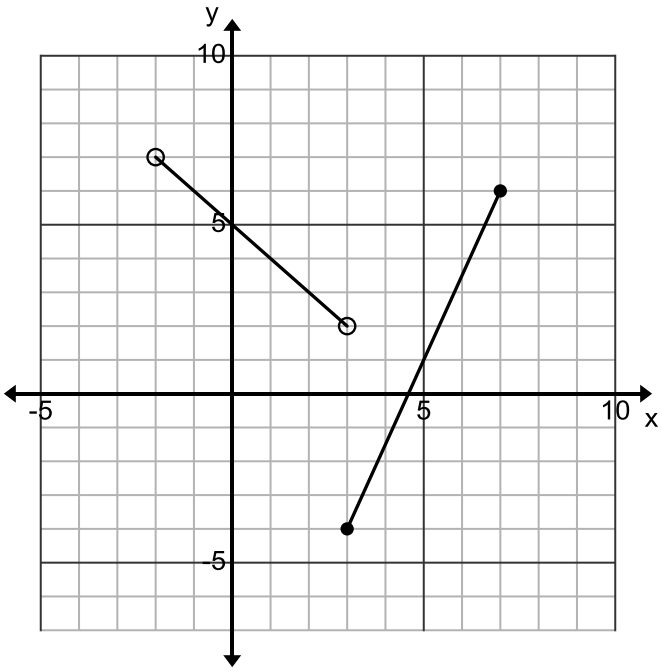
Interval negative:

Interval increasing:

Interval decreasing:

Rate of change over the interval [−2, 0]:

2.



Domain:

Range:

x-intercepts:

y-intercepts:

Interval positive:

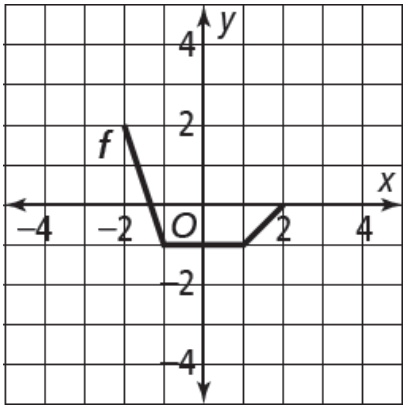
Interval negative:

Interval increasing:

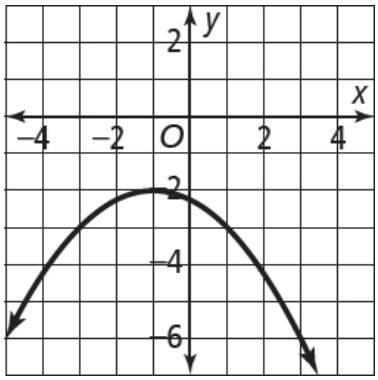
Interval decreasing:

Rate of change over the interval [−2, 0]:

5. The graph represents *f*. Graph $g(x) = 2f(x - 1)$.



6. What transformations of $f(x) = x^2$ combine to result in the graph of function g at the right? Select all that apply.



A translation of 1 unit left

B translation of 1 unit right

C translation of 2 units up

D translation of 2 units down

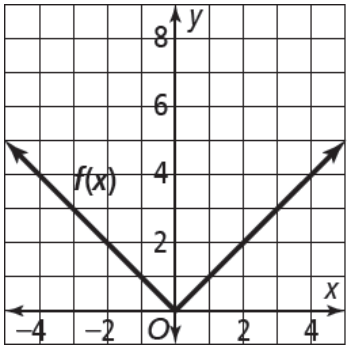
E horizontal stretch by a factor of 2

F vertical stretch by a factor of 2

G reflection across the x-axis

H reflection across the line with equation $x = 1$

7. Graph the function $g(x) = |x| + 4$ as a translation of the parent function f shown. How did the transformation affect the domain and range?



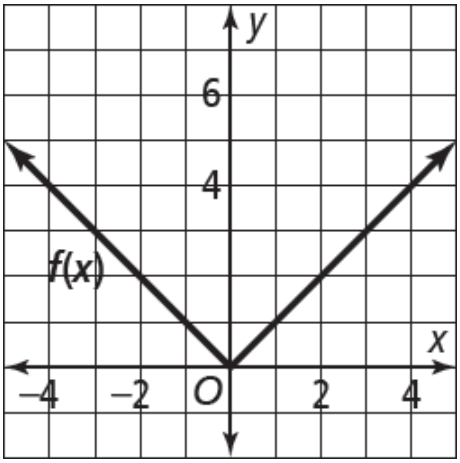
For questions 8 and 9, what is the equation for each reflection for each reflected graph of $f(x) = x^2 - 4$?

8. Reflect across the x-axis

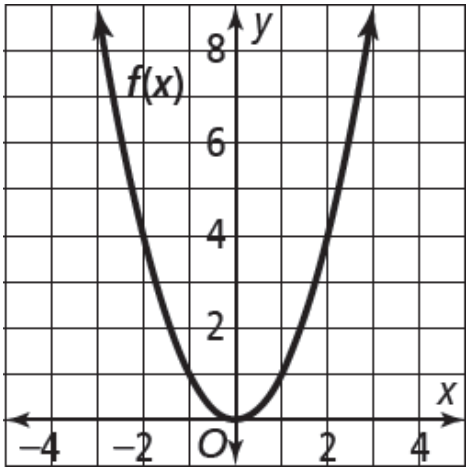
9. Reflect across the y-axis

Graph each function as a vertical dilation of the given parent function f.

10. $g(x) = 4.5|x|$



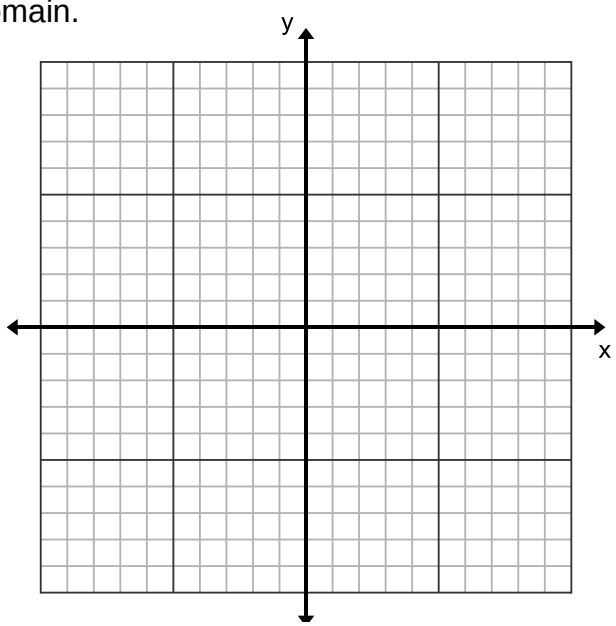
11. $g(x) = 0.5x^2$



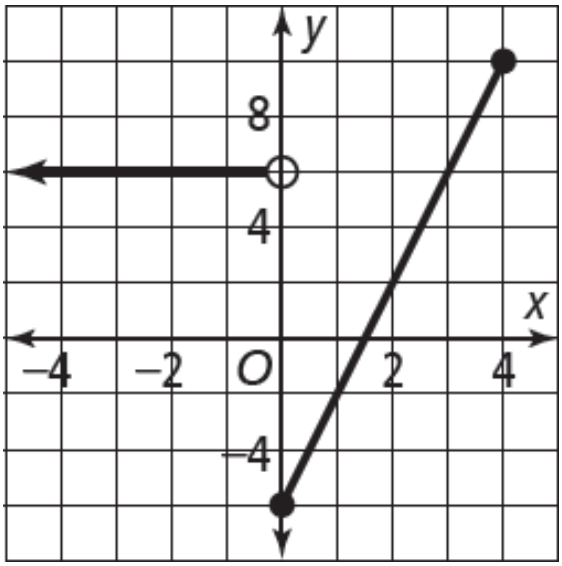
12. Given the parent function $f(x) = x^2$, what is the new equation if the function is translated 4 units to the right and 3 units down?

14. Graph the piecewise-defined function. State the domain and range. Identify whether the function is increasing, constant, or decreasing on each interval of the domain.

$$f(x) = \begin{cases} 2 & -4 \le x \le -2 \\ x + 2 & -2 < x < 3 \\ -3x + 12 & 3 \le x \le 5 \end{cases}$$

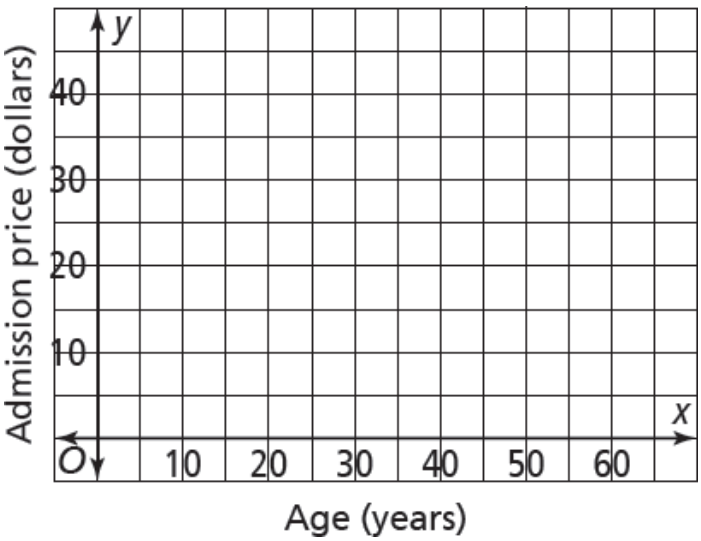


15. Write the rule that defines the piecewise-defined function in the following graph, then determine the domain and range.



17. The table shows the admission prices for an amusement park. Graph the function.

Age	Admission Price
under 5	free
5–17	$25
18–64	$40
65 and over	$35



18. Identify the domain and range of the function in problem 17.

domain: _____ range: _____