

LESSON
1-2

Practice A

Introduction to Parent Functions

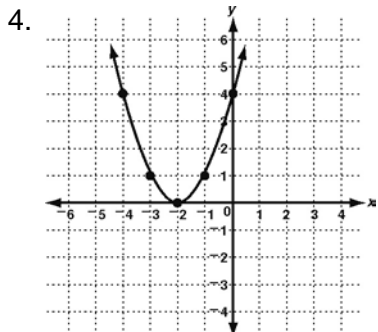
Identify the parent function for g from its function rule.

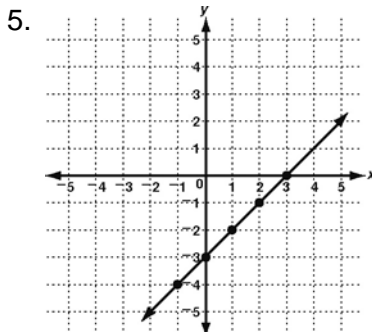
1. $g(x) = (x - 6)^2$

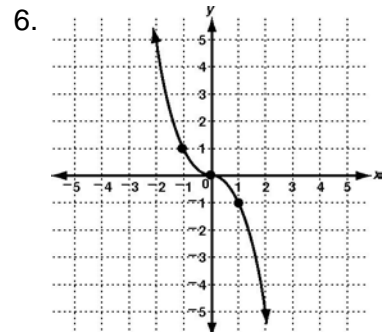
2. $g(x) = x^3 + 1$

3. $g(x) = 3x$

Identify the parent function for each graph. Then describe which transformation of the parent function it represents.



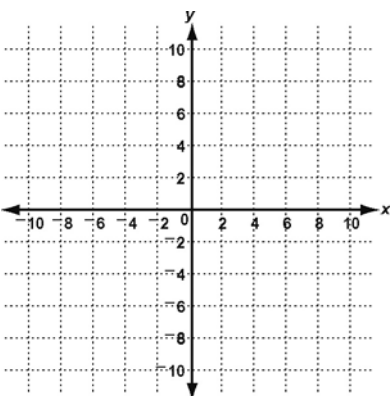




Graph the data from the table. Describe the parent function and the transformation that best approximates the data set.

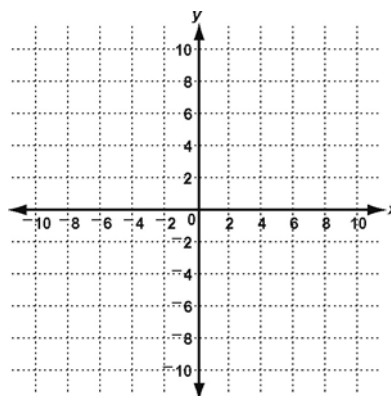
7.

x	-2	-1	0	1	2
y	6	3	2	3	6

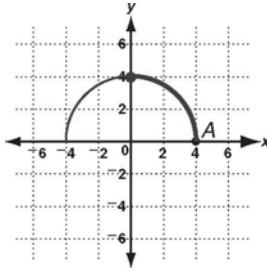


8.

x	-4	-2	0	2	4
y	-8	-1	0	1	8



Challenge



1. $(4, -2), (0, -2), (-1, -6), (3, -6)$
2. $(x, y) \rightarrow (y, -x)$ 3. $(x, y) \rightarrow (-y, x)$
4. $(0, 4), (0, 0), (4, -1), (4, 3)$
5. $(-4, 0), (0, 0), (1, 4), (-3, 4)$
6. $(-2, 0), (2, 0), (3, 4), (-1, 4)$

Problem Solving

1. \$120; \$160; \$220; \$240
2. \$40 per hour 3. \$20 per hour
4. Translated down 15 units
5. Possible answers: A line would go from $(0, 160)$ to $(3, 160)$ with no open circle; the range would not include any numbers less than 160.
6. He would have to pay more to rent the Art Center.
7. A 8. J

Reading Strategies

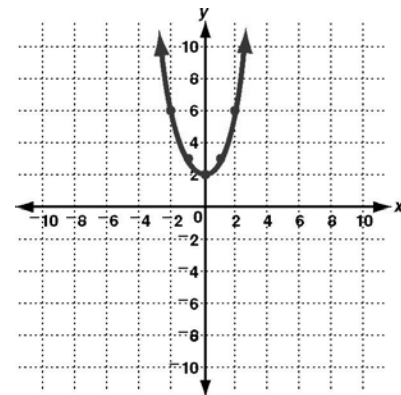
1. The shape of the figure does not change, only the position changes.
2. Add 3 to each x -coordinate; y -coordinates do not change.
3. x -coordinates do not change; subtract 5 from each y -coordinate.
4. x -coordinates do not change; multiply each y -coordinate by -1 .
5. Subtract 4 from each x -coordinate and add 2 to each y -coordinate.

1-2 INTRODUCTION TO PARENT FUNCTIONS

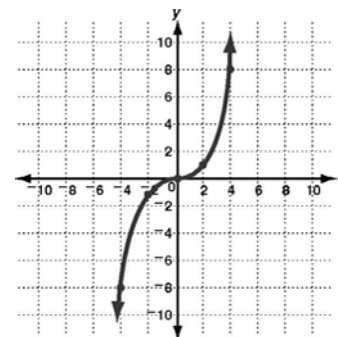
Practice A

1. Quadratic 2. Cubic
3. Linear

4. Quadratic; translation left
5. Linear; translation down
6. Cubic; reflection across the y -axis
7. Quadratic; translation 2 units up



8. Cubic; horizontal stretch by factor of 2



Practice B

1. Square root; translation 4 units left
2. Cubic; translation 4 units right
3. Quadratic; horizontal compression
4. Cubic; translation 1 unit down

