

Key



Round 5

Suppose  $(6,1)$  is the point of the graph of  $y = f(x)$ . For each of the following, name a point on the graph then name the transformation.

- |                          |                       |                    |
|--------------------------|-----------------------|--------------------|
| 1. $y = f(3x)$           | $\frac{x}{3}$         | $(2, 1)$           |
| 2. $y = f(x+2)$          | $x-2$                 | $(4, 1)$           |
| 3. $y = f(x)+5$          | $y+5$                 | $(6, 6)$           |
| 4. $y = \frac{1}{2}f(x)$ | $\frac{1}{2} \cdot y$ | $(6, \frac{1}{2})$ |
| 5. $y = f(-x)$           | $-1x$                 | $(-6, 1)$          |
| 6. $y = f(x-7)$          | $7 \text{ rt}$        | $(13, 1)$          |
| 7. $y = 4f(x)$           | $4 \cdot y$           | $(6, 4)$           |
| 8. $y = f(\frac{1}{2}x)$ | $2x$                  | $(12, 1)$          |
| 9. $y = -f(x)$           | $-1y$                 | $(6, -1)$          |

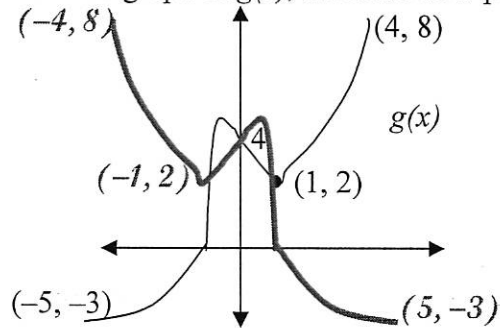
## Abstract Reflections & Dilations with Answers, LCC Unit 7

Name \_\_\_\_\_

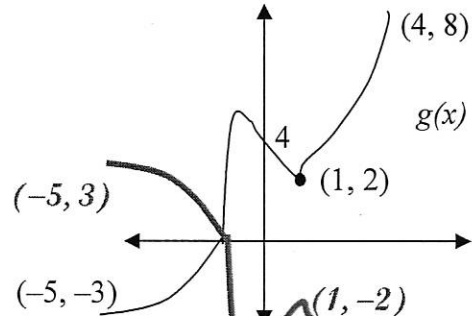
Date \_\_\_\_\_

### Abstract Reflections and Dilations

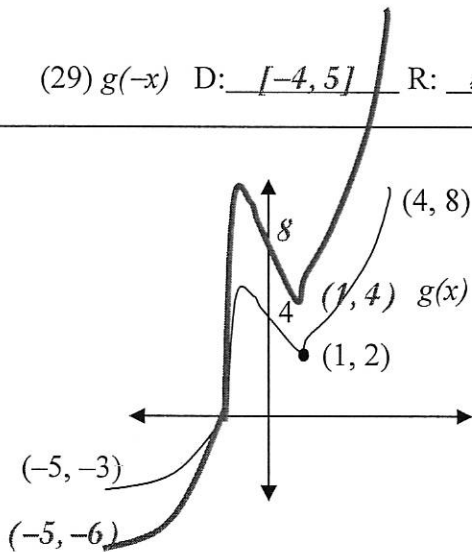
Domain of  $g(x)$ :  $[-5, 4]$  Range of  $g(x)$ :  $[-3, 8]$  Draw the graph of the following over the graph of  $g(x)$ , label the new points, and find the new domain and range:



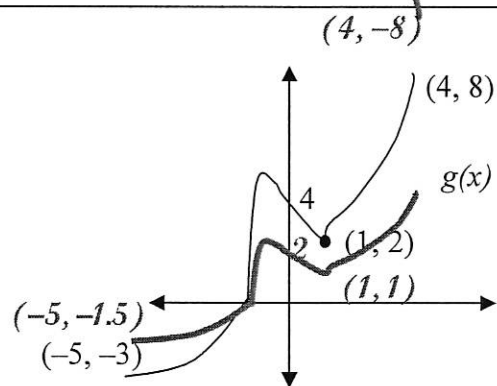
(29)  $g(-x)$  D:  $[-4, 5]$  R: same



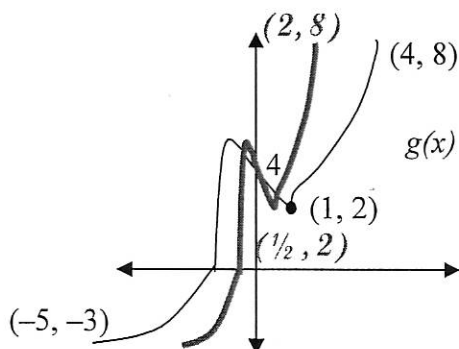
(30)  $-g(x)$  D: same R:  $[-8, 3]$



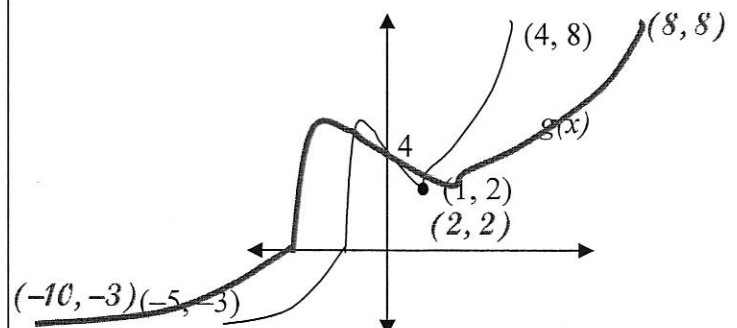
(31)  $2g(x)$  D: same R:  $[-6, 16]$



(32)  $\frac{1}{2}g(x)$  D: same R:  $[-1.5, 4]$



(33)  $g(2x)$  D:  $[-2.5, 2]$  R: same



(34)  $g(\frac{1}{2}x)$  D:  $[-10, 8]$  R: same