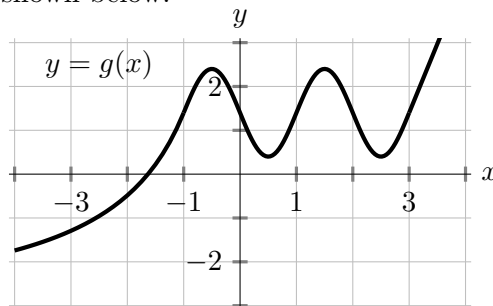
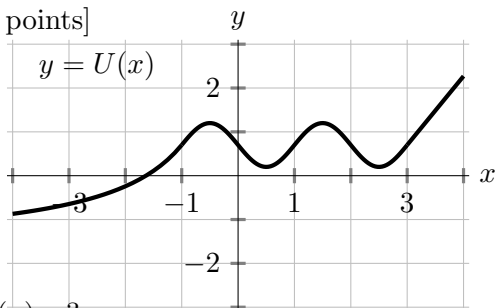


11. [11 points] A portion of the graph of a function g is shown below.

In each of parts **a.**–**d.** on this page, the corresponding portion of the graph of a function obtained from g by one or more transformations is shown, together with a list of possible formulas for that function. In each case, circle the one correct formula for the function shown.



a. [2 points]

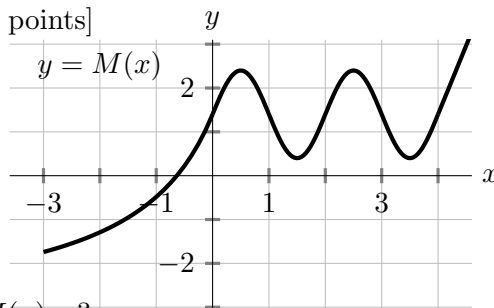


$U(x) = ?$

Circle the one correct choice below.

- | | | |
|--------------|------------|------------|
| $g(x) - 1$ | $g(0.5x)$ | $0.5g(x)$ |
| $g(x) + 1$ | $g(2x)$ | $2g(x)$ |
| $g(x) - 1.5$ | $g(x + 1)$ | $g(x - 1)$ |

b. [2 points]

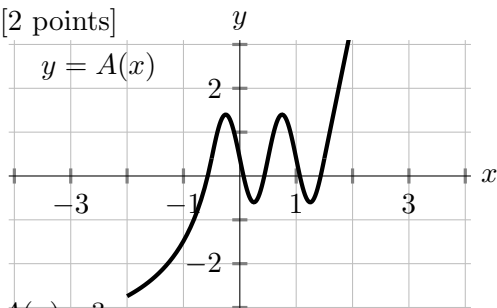


$M(x) = ?$

Circle the one correct choice below.

- | | | |
|--------------|------------|------------|
| $g(x) - 1$ | $g(0.5x)$ | $0.5g(x)$ |
| $g(x) + 1$ | $g(2x)$ | $2g(x)$ |
| $g(x) - 1.5$ | $g(x + 1)$ | $g(x - 1)$ |

c. [2 points]

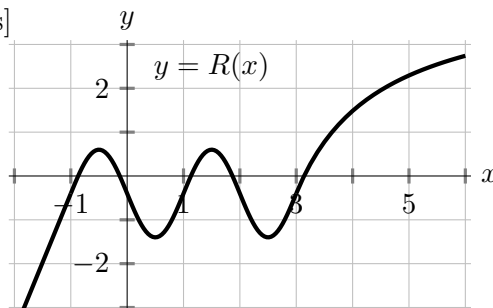


$A(x) = ?$

Circle the one correct choice below.

- | | | |
|-------------|---------------|----------------|
| $g(2x) + 1$ | $g(0.5x) + 1$ | $g(x - 2) - 1$ |
| $g(2x) - 1$ | $g(0.5x) - 1$ | $2g(x - 1)$ |
| $2g(x + 1)$ | $0.5g(x + 1)$ | $0.5g(x - 1)$ |

d. [2 points]



$R(x) = ?$

Circle the one correct choice below.

- | | | |
|-----------------|------------------|------------------|
| $g(-x - 1) + 2$ | $-g(x - 1) - 2$ | $-g(x + 2) - 1$ |
| $g(-x + 1) - 2$ | $-g(-x - 2) - 1$ | $-g(x - 2) + 1$ |
| $g(-x - 2) + 1$ | $-g(-x + 2) + 1$ | $-g(-x + 1) + 2$ |

e. [3 points] A portion of the graph of the derivative of one of the five functions above is shown on the right. Which derivative is shown? Circle the one correct choice below.

- $g'(x)$ $U'(x)$ $M'(x)$ $A'(x)$ $R'(x)$

