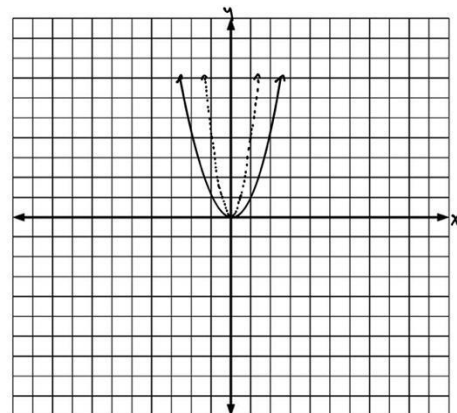


MCR3U – Fall 2023 – McKay
Unit 1 Summative – Multiple Choice

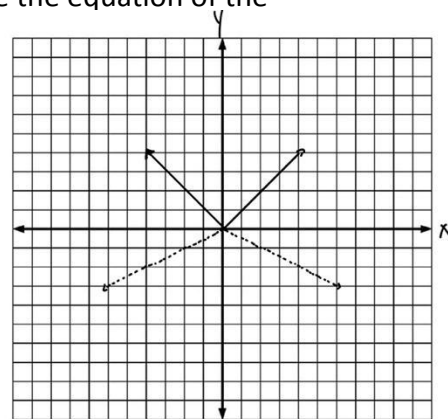
1) The parent function is the solid graph on the grid below. What would be the equation of the dotted graph in relation to the parent graph.

- a) $y = x^2$ b) $y = \left|\frac{1}{2}x\right|$ c) $y = 2x^2$ d) $y = \frac{1}{2}x^2$ e) $y = \sqrt{2x}$



2) The parent function is the solid graph on the grid below. What would be the equation of the dotted graph in relation to the parent function?

- a) $y = -2|x|$ b) $y = 2|x|$ c) $y = -|2x|$
d) $y = \left|-\frac{1}{2}x\right|$ e) $y = -\left|\frac{1}{2}x\right|$



3) Which of the following transformations is required to graph $g(x) = \sqrt{-x + 6}$ from its parent function? [1 Mark]

- a) Reflect the graph $f(x) = \sqrt{x}$ in the x-axis, then translate it 6 units to the left.
b) Reflect the graph $f(x) = \sqrt{x}$ in the y-axis, then translate it 6 units to the right.
c) Reflect the graph $f(x) = \sqrt{x}$ in the y-axis, then translate it 6 units to the left.
d) Reflect the graph $f(x) = \sqrt{x}$ in the x-axis, then translate it 6 units to the right.

4) The point (2,6) is on the graph of $y = f(x)$. What would be the coordinates of this point on the graph $y = f(4x)$? [1 Mark]

- a) (8, 24) b) (8, 6) c) $\left(\frac{1}{2}, \frac{3}{2}\right)$ d) $\left(\frac{1}{2}, 6\right)$

5) The point (3,2) is on the graph of $y = f(x)$. What would be the coordinates of this point on the graph $y = -2f\left(\frac{1}{3}x\right) + 5$? [1 Mark]

- a) (1, -1) b) (1, 9) c) (6, -6) d) (9, 1)