MCR3U - Fall 2023 - Mckay Unit 1 Summative - Multiple Choice

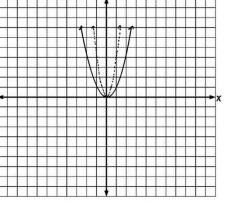
1) The parent function is the solid graph on the grid below. What would be the equation of the dotted graph in relation to the parent graph.



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

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?

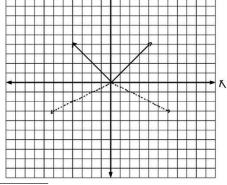
a)
$$y = -2|x|$$

a)
$$y = -2|x|$$
 b) $y = 2|-x|$ c) $y = -|2x|$

c)
$$y = -|2x|$$

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

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



- 3) Which of the following transformations is required to graph $g(x) = \sqrt{-x + 6}$ from it's 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]

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)
$$(1, -1)$$

c)
$$(6, -6)$$