

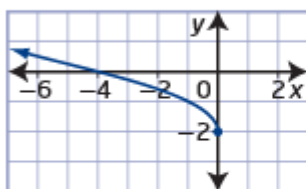
Chapter 2 Review Worksheet

Name: _____

1. If $f(x) = x + 1$, which point is on the graph of $y = \sqrt{f(x)}$?
- A** (0, 0) **B** (0, 1)
C (1, 0) **D** (1, 1)

2. Which function has a domain of $\{x \mid x \geq 5, x \in \mathbb{R}\}$ and a range of $\{y \mid y \geq 0, y \in \mathbb{R}\}$?
- A** $f(x) = \sqrt{x - 5}$
B $f(x) = \sqrt{x} - 5$
C $f(x) = \sqrt{x + 5}$
D $f(x) = \sqrt{x} + 5$

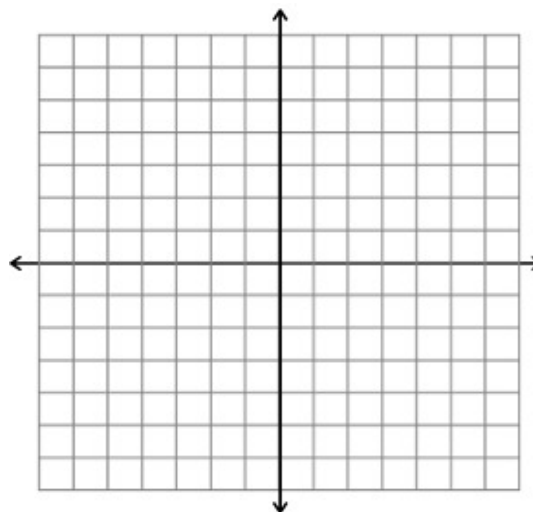
3. Which equation represents the function shown in the graph?



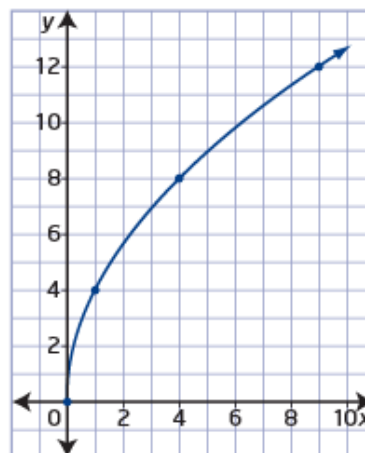
- A** $y - 2 = -\sqrt{x}$ **B** $y + 2 = -\sqrt{x}$
C $y - 2 = \sqrt{-x}$ **D** $y + 2 = \sqrt{-x}$

4. How do the domains and ranges compare for the functions $y = \sqrt{x}$ and $y = \sqrt{5x} + 8$?
- A** Only the domains differ.
B Only the ranges differ.
C Both the domains and ranges differ.
D Neither the domains nor the ranges differ.

5. Solve the equation $5 + \sqrt{9 - 13x} = 20$ graphically. Express your answer to the nearest hundredth.



6. Determine the equation of the function shown:

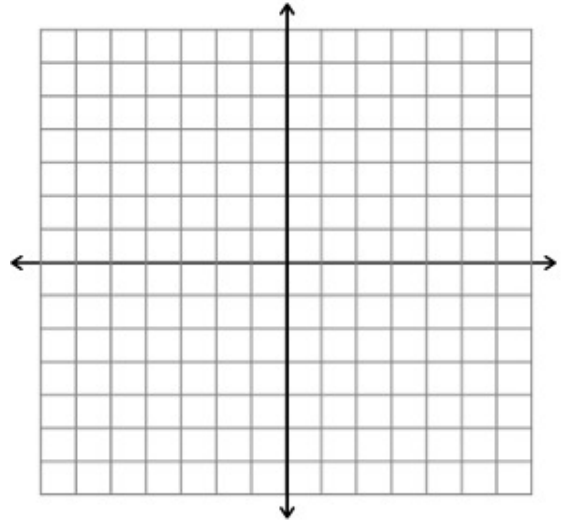


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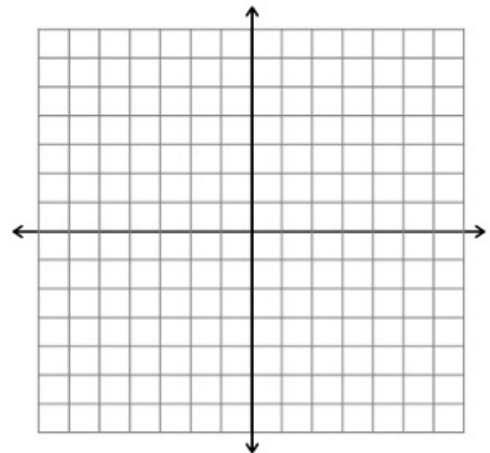
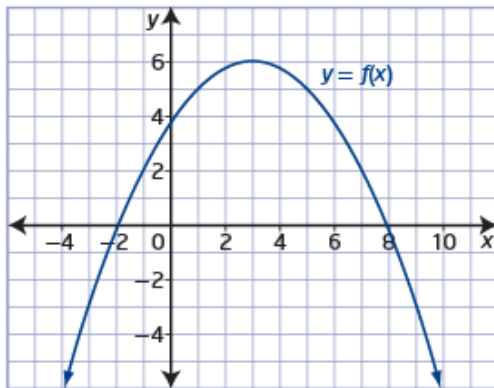
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7. If $f(x) = 8 - 2x^2$, what are the domains and ranges of $y = f(x)$ and $y = \sqrt{f(x)}$?

8. Solve the equation $4 + \sqrt{x+1} = x$ graphically and algebraically. Express your answer to the nearest tenth.



9. Using the graph of $y = f(x)$, sketch the graph of $y = \sqrt{f(x)}$ and explain your strategy.



10. Consider the roof of the mosque at the Canadian Islamic Centre in Edmonton, Alberta. The diameter of the base of the roof is approximately 10 m, and the vertical distance from the centre of the roof to the base is approximately 5 m.

Determine a function of the form $y = a\sqrt{b(x-h)} + k$, where y represents the distance from the base to the roof and x represents the horizontal distance from the centre.



Canadian Islamic Centre (Al-Rashid),
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