

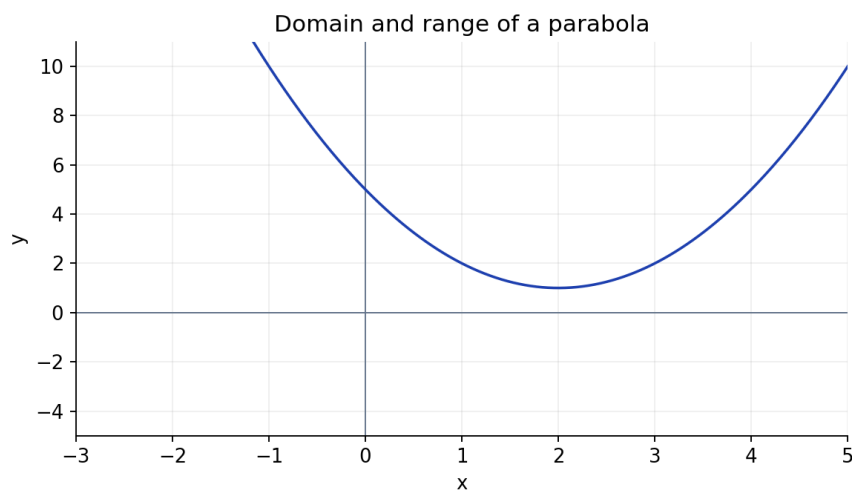
Problems | Name: _____

1.1 Function Notation, Domain, and Range

1.1.1. Find the domain of $f(x) = 1/(x + 3)$.

1.1.2. Find the domain of $g(x) = \sqrt{7 - 2x}$.

1.1.3. Use the graph of $f(x) = (x - 2)^2 + 1$ to give its domain and range.



Compare allowed inputs with actual outputs.

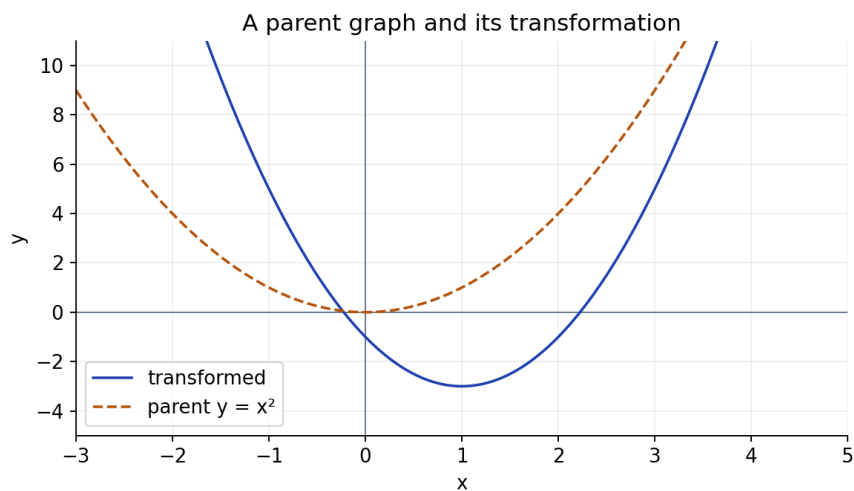
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1.2 Transformations

1.2.1. Describe $y = 3\sqrt{x+1} - 2$ relative to $y = \sqrt{x}$.

1.2.2. Transform $y = x^2$ by reflecting across the x-axis and moving down 4.

1.2.3. Compare the parent graph and transformed graph $y = 2(x-1)^2 - 3$. State its vertex and vertical scale.



Compare position, orientation, and vertical scale.

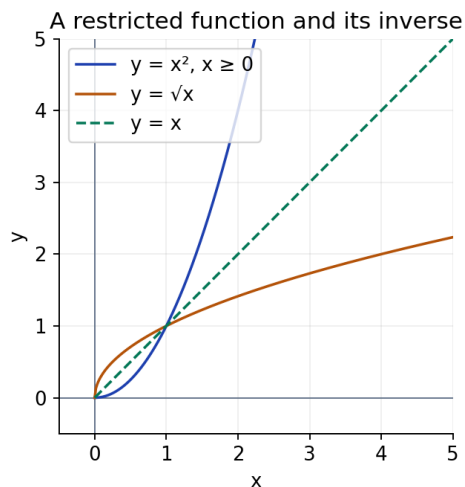
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1.3 Composition and Inverses

1.3.1. For $f(x) = x + 2$ and $g(x) = 3x$, find $(g \circ f)(x)$.

1.3.2. Find the inverse of $h(x) = (x - 5)/2$.

1.3.3. The graph shows $y = x^2$ restricted to $x \geq 0$ and its inverse. State the inverse and explain the restriction.



The restricted parabola passes the horizontal-line test.
