ALGEBRA 2 · HOMEWORK

Restrict a Domain to Produce an Inverse Function

SCORE / 25

01 Part A · Practice

If the inverse of f is not a function, restrict the domain of f to a part where it is one-to-one (for a parabola, one side of the vertex).

1 ●○○ $f(x) = (x + 2)^2 - 2$ with domain $x \leq -2$. Find $f^{-1}(x)$.

2 ●○○ $f(x) = (x + 5)^2 + 1, x \geq -5$. State the domain and range of f^{-1}.

3 ●○○ Give a domain restriction that makes the inverse of $f(x) = (x - 4)^2 + 2$ a function.

4 ●○○ $f(x) = (x + 3)^2 - 1$ with domain $x \geq -3$. Find $f^{-1}(x)$ and its domain.

5 ●○○ $f(x) = (x - 2)^2 - 3, x \geq 2$. State the domain and range of f^{-1}.

6 ●○○ $f(x) = (x - 4)^2 + 1$ with domain $x \geq 4$. Find $f^{-1}(x)$ and its domain.

7 ●○○ $f(x) = x^2 + 3$ with domain $x \leq 0$. Find $f^{-1}(x)$.

8 ●○○ Give a domain restriction that makes the inverse of $f(x) = (x + 5)^2 + 4$ a function.

9 ●○○ $f(x) = (x - 1)^2 - 3$ with domain $x \geq 1$. Find $f^{-1}(x)$ and its domain.

10 ●○○ $f(x) = (x - 5)^2, x \geq 5$. State the domain and range of f^{-1}.

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Preview - the full worksheet and its answer key are at primeworksheet.com