

## Pre-AP Station #1

**Find the inverse**

$$f(x) = \frac{1}{2}x + 1$$

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$$f^{-1}(x) = \frac{x}{5} + \frac{3}{5}$$

## Pre-AP Station #2

**Find the inverse**

$$f(x) = x^2 + 2$$

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$$(f \circ g) = 6x - 1$$

## Pre-AP Station #3

**Find the inverse**

$$f(x) = \sqrt{x+1}$$

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$$(f \circ f) = 2$$

## Pre-AP Station #4

**Find the inverse**

$$f(x) = -\frac{x^2}{4} + 1$$

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$$(g \circ f) = \frac{4}{5}$$

## Pre-AP Station #5

**Find the inverse**

$$f(x) = 5x - 3$$

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$$f^{-1}(x) = x^2 - 1$$

## Pre-AP Station #6

**Find the composition if  $f(x) = 3x + 5$**

$$(f \circ f)(-2)$$

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$$f^{-1}(x) = \pm\sqrt{x-2}$$

## Pre-AP Station #7

**Find the composition if**  $f(x) = -x^2 + x + 1$   
**and**  $g(x) = -\frac{1}{5}x + 1$

$$(g \circ f)(1)$$

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$$f^{-1}(x) = 2x - 2$$

## Pre-AP Station #8

**Find the composition if  $f(x) = \sqrt{x+3}$  and  $g(x) = -x^2 + 3$**

$$g(f(x))$$

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$$f^{-1}(x) = \pm 2\sqrt{-(x-1)}$$



## Pre-AP Station #9

**Find the composition if  $f(x) = 2x - 5$  and  $g(x) = 3x + 2$**

$$(f \circ g)(x)$$

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$$(f \circ g) = x^4 + 2x^2 + 2$$

## Pre-AP Station #10

**Find the composition if**  $f(x) = x^2 + 1$

$$f(f(x))$$

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$$(g \circ f) = -x$$