

# Composite Functions

## Overview of problems



Example Set: A

*Find the composition of the given functions*

$$f(x) = 2x$$

$$g(x) = x + 1$$

$$f(g(x)) =$$

$$g(f(x)) =$$

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

$$g(x) = x^2$$

$$f(g(x)) =$$

$$g(f(x)) =$$



## Example Set: B

Find the composition of the given functions

$$f(x) = 2x + 3 \quad g(x) = -4x - 3$$

$$f(g(x)) = \quad g(f(x)) =$$

$$f(x) = -2x^2 + 7 \quad g(x) = x + 5$$

$$f(g(x)) = \quad g(f(x)) =$$

# Composite Functions



## Overview of problems- KEY



Example Set: A

Find the composition of the given functions

$$f(x) = 2x$$

$$g(x) = x + 1$$

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

$$g(f(x)) = 2x + 1$$

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

$$g(x) = x^2$$

$$f(g(x)) = x^2 - 3$$

$$g(f(x)) = x^2 - 6x + 9$$



## Example Set: B

Find the composition of the given functions

$$f(x) = 2x + 3$$

$$g(x) = -4x - 3$$

$$f(g(x)) = -8x - 3$$

$$g(f(x)) = -8x - 15$$

$$f(x) = -2x^2 + 7 \quad g(x) = x + 5$$

$$f(g(x)) = -2x^2 - 20x - 43$$

$$g(f(x)) = -2x^2 + 12$$