

# Fill in the Blanks

# Composite Functions

$f(x)$	$g(x)$	$fg(x)$	$gf(x)$
$f(x) = x - 3$	$g(x) = x^2$	$fg(x) = x^2 - 3$	$gf(x) = (x - 3)^2$
$f(x) = \frac{x}{5}$	$g(x) = x + 1$	$fg(x) = \frac{x + 1}{5}$	$gf(x) = \frac{x}{5} + 1$
$f(x) = 3x$	$g(x) = 7 - x$	$fg(x) = 21 - 3x$	$gf(x) = 7 - 3x$
$f(x) = \sqrt{x}$	$g(x) = \frac{x}{4}$	$fg(x) = \sqrt{\frac{x}{4}}$	$gf(x) = \frac{\sqrt{x}}{4}$
$f(x) = 2x + 9$	$g(x) = x - 3$	$fg(x) = 2x + 3$	$gf(x) = 2x + 15$
$f(x) = x^2 - 1$	$g(x) = \frac{x}{3}$	$fg(x) = \frac{x^2}{9} - 1$	$gf(x) = \frac{x^2 - 1}{3}$
$f(x) = \sqrt{x}$	$g(x) = 4 - 3x$	$fg(x) = \sqrt{4 - 3x}$	$gf(x) = 4 - 3\sqrt{x}$
$f(x) = \frac{2x}{5}$	$g(x) = x^2$	$fg(x) = \frac{2x^2}{5}$	$gf(x) = \frac{4x^2}{25}$
$f(x) = \frac{1}{x}$	$g(x) = 2x - 3$	$fg(x) = \frac{1}{2x - 3}$	$gf(x) = \frac{2}{x} - 3$
$f(x) = 9 - x$	$g(x) = \sqrt{2x}$	$fg(x) = 9 - \sqrt{2x}$	$gf(x) = \sqrt{18 - 2x}$
$f(x) = 3x - 1$	$g(x) = \frac{2}{x + 1}$	$fg(x) = \frac{6}{x + 1} - 1$	$gf(x) = \frac{2}{3x}$
$f(x) = \frac{x}{10}$	$g(x) = x - 3$	$fg(x) = \frac{x - 3}{10}$	$gf(x) = \frac{x}{10} - 3$
$f(x) = 2x + 1$	$g(x) = x^3$	$fg(x) = 2x^3 + 1$	$gf(x) = (2x + 1)^3$
$f(x) = \frac{1}{x}$	$g(x) = x^2 + 2$	$fg(x) = \frac{1}{x^2 + 2}$	$gf(x) = \frac{1}{x^2} + 2$