

# Fill in the Blanks

# Evaluating Composite Two-Step Functions

Question	Input	1 <sup>st</sup> Function	2 <sup>nd</sup> Function	Output	Answer
$f(x) = x^2 + 2$ $g(x) = 3x - 1$ Find $fg(4)$	4	$\times 3$ → $-1$	square → $+2$	123	$fg(4) = 123$
$f(x) = 3\sqrt{x}$ $g(x) = 2x + 5$ Find $gf(9)$	9	square root → $\times 3$	$\times 2$ → $+5$	23	$gf(9) = 23$
$f(x) = \frac{1}{x} - 3$ $g(x) = 2x + 4$ Find $fg(-1)$	-1	$\times 2$ → $+4$	reciprocal → $-3$	$-2\frac{1}{2}$	$fg(-1) = -2.5$
$g(x) = \frac{x}{2} + 1$ $h(x) = 4x^2$ Find $hg(0.5)$	0.5	$\div 2$ → $+1$	square → $\times 4$	$\frac{25}{4}$	$hg(0.5) = 6.25$
$f(x) = x^2 + 3$ $g(x) = 2x - 7$ Find $fg(5)$	5	$\times 2$ → $-7$	square → $+3$	12	$fg(5) = 12$