

Function Notation Worksheet

Instructions: Show substitutions and simplify completely. State any restrictions when they affect an answer.

Given Functions

$f(x) = -\frac{3}{4}x + 5$	$g(x) = 2x^2 - 5x - 3$	$h(x) = \sqrt{4x + 12} - 2$
$k(x) = -3(x - 2)^2 + 7$	$m(x) = 12/(x - 1) - 4$	

Part A Determine Each Value or Expression

1. $f(-8)$	2. $h(1)$
3. $k(-1) + m(-2)$	4. $g(3) - f(6)$
5. $f(12x^2)$	6. $g(x - 2)$
7. $k(x + 1)$	8. $g(x) - k(x)$
9. $2f(x) + g(x)$	10. $h(3x - 2)$

Part B Solve for x

Solve each equation. Check for extraneous or excluded values where appropriate.

1. $f(x) = 11$	2. $m(x) = 2$
3. $g(x) = 0$	4. $h(x) = 4$
5. $k(x) = -5$	6. $f(x) = g(0)$

Part C Function Composition Challenge

1. Determine $k(g(x))$ and simplify.
2. Determine $g(f(x))$ and simplify.
3. Determine $h(k(2))$.
4. Determine all x-values for which $m(f(x))$ is undefined.