

Comparing Functions

{ 6.6 }

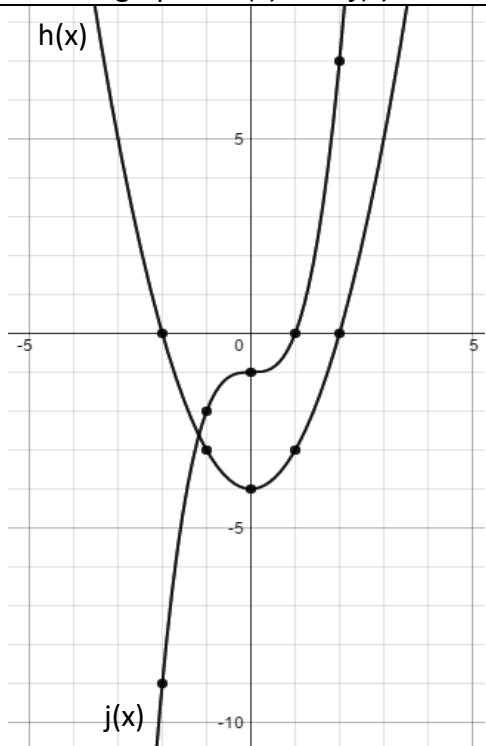
Secondary Math II Notes

OBJECTIVE: Evaluate functions when multiple operations are given.

Compare Functions: In order to compare functions, first evaluate each function and compare the y-values as either greater than (or equal too), less than (or equal too), or equal to each other.

Comparing Functions Graphically

Use the graph of $h(x)$ and $j(x)$ to answer the following questions



Fill in the box with the appropriate inequality symbol.

$$h(-1) + j(-2) \quad \square \quad j(2) - h(1)$$

Fill in the box with the appropriate inequality symbol.

$$(j \circ j)(0) + 4 \quad \square \quad -5(j - h)(0)$$

Fill in the box with the appropriate inequality symbol.

$$h(j(0)) + 2h(-3) \quad \square \quad (j + h)(0) * (h(3) + 3)$$

Fill in the box with the appropriate inequality symbol.

$$h(j(h(2))) * j(2) \quad \square \quad 3(j - h)(2) * (j + h)(-2)$$

Climb a mountain

Answer the odd problems. If the odd problem is incorrect, answer the problem directly to the right of it.

1.	$p(n) = 3n + 3$ Find $p(-6)$	$g(x) = x + 4$ Find $g(4)$	3.	$p(x) = -x^2 - 5$ Find $p(r)$	$h(x) = -2x^2 - 4$ Find $h(a)$
5.	$h(a) = 3a + 5$ $g(a) = 4a - 1$ Find $(h+g)(7)$	$f(x) = -2x + 5$ $g(x) = 2x$ Find $f(5)+g(5)$	7.	$h(a) = 3a + 5$ $g(a) = 4a - 1$ Find $(h+g)(b)$	$f(x) = -2x + 5$ $g(x) = 2x$ Find $f(c)+g(c)$

9.	$h(t) = 4t - 5$ $g(t) = t^2 - 3$ Find $(h+g)(-2r)$	$f(t) = 2t + 4$ $g(t) = t^3 - 1$ Find $g(-3z)+f(-3z)$	11.	$h(t) = 4t - 5$ $g(t) = t^2 - 3$ Find $(3h+g)(-7b)$	$f(t) = 2t + 4$ $g(t) = t^3 - 1$ Find $g(4z)+5f(4z)$
13.	$h(a) = 13a - 5$ $g(a) = 2a + 1$ Find $(g-h)(3)$	$f(x) = 12x + 5$ $g(x) = 6$ Find $f(4)-g(4)$	15.	$h(a) = 13a - 5$ $g(a) = 2a + 1$ Find $h(x)-g(x)$	$f(x) = 12x + 5$ $g(x) = 6$ Find $(g-f)(a)$
17.	$h(t) = -t - 7$ $g(t) = -t^2 + 2$ Find $(h-g)(4r)$	$f(t) = 3t + 4$ $g(t) = -2t^3 - 11$ Find $f(2a)-g(2a)$	19.	$h(t) = -t - 7$ $g(t) = -t^2 + 2$ Find $g(-3c)-2h(-3c)$	$f(t) = 3t + 4$ $g(t) = -2t^3 - 11$ Find $(3g-f)(-2z)$
21.	$f(t) = t - 3$ $g(t) = t + 4$ Find $(fg)(-1)$	$f(x) = 4x - 1$ $g(x) = 2x + 2$ Find $f(2) \cdot g(2)$	23.	$g(t) = t - 5$ $h(t) = t^2 + 4t$ Find $(h \cdot g)(b)$	$f(x) = 3x$ $g(x) = -2x + 2$ Find $(fg)(c)$

25.	$h(t) = t - 3$ $g(t) = t + 4$ Find $(h \cdot g)(-2a)$	$f(x) = 4x - 1$ $g(x) = 2x + 2$ Find $g(-3z) \cdot f(-3z)$	27.	$g(t) = t - 5$ $h(t) = t^2 + 4t$ Find $(h \cdot 2g)(-b)$	$f(x) = 3x$ $g(x) = -2x + 2$ Find $g(-z) \cdot 5f(-z)$
29.	$g(n) = 3n + 2$ $f(n) = 2n^2 + 5$ Find $f(g(2))$	$h(x) = 3x^2 - 2$ $g(x) = 4x + 1$ Find $h(g(5))$	31.	$h(x) = -x^2 - 2x$ $g(x) = 4x$ Find $(h \circ g)(-2)$	$g(t) = 2t$ $f(t) = -t^2 + 5x$ Find $(f \circ g)(-3)$
33.	$g(n) = 3n + 2$ $f(n) = 2n^2 + 5$ Find $g(g(r))$	$h(x) = 3x^2 - 2$ $g(x) = 4x + 1$ Find $g(g(z))$	35.	$h(x) = -x^2 - 2$ $g(x) = 4x + 1$ Find $g(h(2a))$	$g(t) = 2t + 5$ $f(t) = -t^2 + 5$ Find $g(f(3b))$
37.	$f(x) = 4x - 1$ $g(x) = 2x + 2$ Find $f(g(2)) + (fg)(-1)$	$f(x) = 3x$ $g(x) = -2x + 2$ Find $f(2) \cdot g(2) + (h \circ g)(-1)$	39.	$h(x) = -x^2 - 2x$ $g(x) = 4x$ Find $(h - g)(1) + g(3)$	$g(n) = 3n + 2$ $f(n) = 2n^2 + 5$ Find $f(2) - (g + f)(3)$