Name: _____

Composition of Three Functions

L1S3

A) If $f(x) = x^2 - 3$, $g(x) = 2x^2 + 6$ and $h(x) = -x$, find the following.

1) $g(f(h(x)))$

2) $f(h(g(x)))$

B) If $f(x) = 5x - 1$, $g(x) = 6x$ and $h(x) = 3 - x$, find the following.

1) $(f \circ g \circ h)(x)$

C) If $f(x) = x + 8$, $g(x) = 4$

1) $(g \circ (h \circ f))(x)$

3) Is $(g \circ (h \circ f))(x) =$

D) 1) If $g(x) = 4x - 3$ and $h(x) = 1 - x$, which of the following represents $h(h(g(x)))$?

i) $4x + 3$ ii) $2x^2 + 4x - 10$ iii) $3x - 7x^2$ iv) $4x - 3$

2) If $f(x) = 3x + 8$ and $g(x) = -6$, $h(x) = -2x^2$, which of the following represents $(f \circ h \circ g)(x)$?

i) $2x^2 - 85$ ii) -208 iii) $3x + 92$ iv) 208