## **Composition of Three Functions**

A) If  $f(x) = 9x^2 - 6x$ , g(x) = 4x + 7 and h(x) = -8, find the following.

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

2) g(h(g(x)))

B) If f(x) = x - 5, g(x) = x and  $h(x) = 1 + x^2$ , find the following.

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

## **PREVIEW**

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

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

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D) 1) If f(x) = 4, g(x) = 9x - 8 and n(x) = 3x + 1, which of the following represents  $(g \circ f \circ h)(x)$ ?

- i) -28
- ii) 9x 8 iii) 28
- iv) 9x + 12

2) If f(x) = -2x, g(x) = 5x and h(x) = x + 6, which of the following represents h(g(f(x)))?

- i) -10x + 6 ii) 4x + 6
- iii) -10x 6 iv) 10x + 6