Name: _____

MS1

Evaluating Composition of Two Functions

A) If $h(x) = \sqrt[3]{3x}$, $f(x) = x + 2$ and $g(x) = 3x^3 + 4$, evaluate the following.

1) $g\left(h\left(-\frac{1}{4}\right)\right)$

2) $f\left(f\left(\frac{2}{3}\right)\right)$

B) If $f(x) = x^2 + 9x$, $g(x) = e^{5x}$ and $h(x) = -13$, evaluate the following.

1) $(h \circ g)\left(\frac{9}{2}\right)$

C) If $h(x) = \sqrt{2x + 1}$ and

1) $(f \circ h)\left(-\frac{1}{3}\right)$

3) Is $(f \circ h)\left(-\frac{1}{3}\right) \neq (h \circ$

D) 1) If $f(x) = 4$ and $g(x) = \frac{}{x^2 - 9}$, which of the following represents $(g \circ f)\left(-\frac{4}{9}\right)$?

i) 1 ii) −10 iii) 10 iv) −1

2) If $g(x) = \sqrt{x}$ and $h(x) = x^4 - 3x^2 - 1$, which of the following represents $h\left(g\left(\frac{1}{5}\right)\right)$?

i) $-\frac{36}{25}$ ii) $-\frac{39}{25}$ iii) $\frac{36}{25}$ iv) $\frac{39}{25}$