Name : _____

## Function Operations

**A)** 1) If $f(x) = 6x^2 - 1$ and $g(x) = x^2 + 9x$, find $(g - f)(x)$.

2) If $f(x) = x^2 - 2x - 8$ and $g(x) = x + 2$, find $\left(\dfrac{f}{g}\right)(x)$.

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**B)** If $f(x) = 10x^3 + x$ and $g(x) = 7 + 4x$ ; find the following.

i) $f(x) + g(x)$          ii) $(g \cdot f)(x)$

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**C)** 1) If $f(x) = 3x^2 - 15$ and ... $g(x) = x - 6$, find $f(4) - g(4)$.

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**D)** If $f(x) = 14$ and $g(x) = x$...

i) $\dfrac{f(0)}{g(0)}$

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**E)** 1) Which of the following represents $g(8) - f(8)$, if $f(x) = 5 - 4x^-$ and $g(x) = 9x$?

i) $-179$          ii) $323$          iii) $-323$          iv) $179$

2) Which of the following represents $(f + g)(x)$, if $f(x) = 7x^3 + 6x$ and $g(x) = -6x^3 - x$?

i) $x^3 - 5x$          ii) $x^3 - 7x$          iii) $x^3 + 7$          iv) $x^3 + 5x$