

Name : \_\_\_\_\_

## Function Operations

Mul/Div: MS2

A) 1) If  $f(x) = \frac{1}{7}x^2 - 7$  and  $g(x) = \frac{1}{7}x - 1$ ,  
find  $\left(\frac{f}{g}\right)(x)$ .

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2) If  $f(x) = 4x + 8$  and  $g(x) = \frac{1}{4}x^3 - 3x^2$ ,  
find  $(g \cdot f)(x)$ .

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B) If  $f(x) = -x$  and  $g(x) = \frac{5}{2}x^2 + 3x$ ; find the following.

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

ii)  $\frac{g(x)}{f(x)}$

C) 1) If  $f(x) = x^2 + 2x + 1$  and  
find  $(g \cdot f)\left(-\frac{1}{2}\right)$ .

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and  $g(x) = 15$ ,

D) If  $f(x) = 3x - 1$  and  $g(x) =$

i)  $\frac{f(-1)}{g(-1)}$

E) 1) Which of the following represents  $\frac{g(f(x))}{f(3)}$ , if  $f(x) = \frac{x}{9}$  and  $g(x) = 10x^2 - 12$ ?

i) 366

ii) 297

iii) 351

iv) 405

2) Which of the following represents  $(f \cdot g)(x)$ , if  $f(x) = 6x^3 - 2$  and  $g(x) = \frac{5}{6}x$ ?

i)  $5x^4 - x$

ii)  $5x^4 - 7x + \frac{1}{3}$

iii)  $5x^4 + \frac{5}{3}x - 10$

iv)  $5x^4 - \frac{5}{3}x$

