

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

## Function Operations

MS1

A) 1) If  $f(x) = 4x - \frac{2}{3}$  and  $g(x) = x^2 - \frac{1}{6}x$ ,  
find  $\left(\frac{g}{f}\right)(x)$ .

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2) If  $f(x) = \frac{3}{8}x^3 + 7x - 10$  and  $g(x) = \frac{5}{8}x^3 - 9x$ ,  
find  $(f + g)(x)$ .

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B) If  $f(x) = -\frac{6}{7}x$  and  $g(x) = \frac{8}{7}x + 1$  ; find the following.

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

ii)  $g(x) - f(x)$

C) 1) If  $f(x) = -x^3 + 11$  and  
find  $(g + f)\left(\frac{3}{2}\right)$ .

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$g(x) = \frac{4}{9} - 3x$ ,

D) If  $f(x) = -\frac{7}{3}x^2$  and  $g(x)$

i)  $g(-3) - f(-3)$

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E) 1) Which of the following represents  $f(x) + g(x)$ , if  $f(x) = -\frac{1}{4} + x - 5x^2$  and  $g(x) = \frac{5}{4}$ ?

i)  $-5x^2 + x + \frac{1}{2}$

ii)  $5x^2 + x + 2$

iii)  $5x^2 + x - \frac{1}{2}$

iv)  $-5x^2 + x + 2$

2) Which of the following represents  $g(7) \cdot f(7)$ , if  $f(x) = x - \frac{9}{5}$  and  $g(x) = 6x - 2$ ?

i) -208

ii) 220

iii) 208

iv) -220

## Function Operations

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find  $\left(\frac{g}{f}\right)(x)$ .

$\frac{x}{4}$

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find  $(f + g)(x)$ .

$x^3 - 2x - 10$

B) If  $f(x) = -\frac{6}{7}x$  and  $g(x) = \frac{8}{7}x + 1$ ; find the following.

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

ii)  $g(x) - f(x)$

$-\frac{48}{49}x^2 - 1$

C) 1) If  $f(x) = -x^3 + 11$  and  
find  $(g + f)\left(\frac{3}{2}\right)$ .

$-\frac{59}{8}$  or  $-7\frac{3}{8}$

D) If  $f(x) = -\frac{7}{3}x^2$  and  $g(x)$

i)  $g(-3) - f(-3)$

$9$

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