

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

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## Function Operations

A) 1) If  $f(x) = \frac{1}{5} - 3x$  and  $g(x) = 8x^2 - 4x - \frac{9}{5}$ ,  
find  $(f - g)(x)$ .

2) If  $f(x) = \frac{2}{3}x + 11$  and  $g(x) = 14 - \frac{8}{3}x$ ,  
find  $f(x) + g(x)$ .

B) If  $f(x) = \frac{5}{2}x^3 + 4x^2$  and  $g(x) = \frac{9}{2}x^3 - 5x$ ; find the following.

i)  $g(x) + f(x)$

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

C) 1) If  $f(x) = x + 5x^2$  and  
find  $(f - g)\left(\frac{1}{4}\right)$ .

and  $g(x) = -x^2 + 6x$ ,

D) If  $f(x) = \frac{7}{4}x$  and  $g(x) =$   
i)  $g\left(-\frac{4}{3}\right) + f\left(-\frac{4}{3}\right)$

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E) 1) Which of the following represents  $(f + g)(x)$ , if  $f(x) = -9x - \frac{7}{7}$  and  $g(x) = x^3 - 2x - \frac{6}{7}$ ?

i)  $x^3 + 7x + 7$

ii)  $x^3 - 7x - 7$

iii)  $x^3 - 11x - 1$

iv)  $x^3 + 11x + 1$

2) Which of the following represents  $g(6) - f(6)$ , if  $f(x) = \frac{5}{3}x - 1$  and  $g(x) = -8x$ ?

i)  $-39$

ii)  $-57$

iii)  $-44$

iv)  $-50$

**Function Operations**

A) 1) If  $f(x) = \frac{1}{5} - 3x$  and  $g(x) = 8x^2 - 4x - \frac{9}{5}$ ,  
find  $(f - g)(x)$ .

**$-8x^2 + x + 2$**

2) If  $f(x) = \frac{2}{3}x + 11$  and  $g(x) = 14 - \frac{8}{3}x$ ,  
find  $f(x) + g(x)$ .

**$-2x + 25$**

B) If  $f(x) = \frac{5}{2}x^3 + 4x^2$  and  $g(x) = \frac{9}{2}x^3 - 5x$ ; find the following.

i)  $g(x) + f(x)$

**$7x^3 + 4x^2$**

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

**$-5x$**

C) 1) If  $f(x) = x + 5x^2$  and  
find  $(f - g)\left(\frac{1}{4}\right)$ .

**15**

and  $g(x) = -x^2 + 6x$ ,

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i)  $g\left(-\frac{4}{3}\right) + f\left(-\frac{4}{3}\right)$

**12**

**$15\frac{3}{4}$**

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