

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

## Function Operations

Mul/Div: ES3

A) 1) If  $f(x) = 6x + 12$  and  $g(x) = x^2 + 6x + 8$ ,  
find  $\left(\frac{g}{f}\right)(x)$ .

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

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B) If  $f(x) = 5x^2 - 2x - 7$  and  $g(x) = 5x - 7$  ; find the following.

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

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

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C) 1) If  $f(x) = x^3 + 3$  and  $g(x) = 8x + 15$ ,  
find  $\frac{g(2)}{f(2)}$ .

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D) If  $f(x) = 2x + 9$  and  $g(x) = 8x + 15$ ,  
find  $f(-1) \cdot g(-1)$ .

i)  $f(-1) \cdot g(-1)$

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E) 1) Which of the following represents  $\left(\frac{f}{g}\right)(x)$ , if  $f(x) = -14$  and  $g(x) = -7x^2$ ?

i)  $\frac{x^2}{7}$

ii)  $\frac{7}{x^2}$

iii)  $\frac{2}{x^2}$

iv)  $\frac{x^2}{2}$

2) Which of the following represents  $g(7) \cdot f(7)$ , if  $f(x) = -5 + x$  and  $g(x) = -9 + 3x^2$ ?

i) 276

ii) 378

iii) 243

iv) 294

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## Function Operations

A) 1) If  $f(x) = 6x + 12$  and  $g(x) = x^2 + 6x + 8$ ,  
find  $\left(\frac{g}{f}\right)(x)$ .

$$\frac{x + 4}{6}$$

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

$$x^3 - 5x^2 + 4x$$

B) If  $f(x) = 5x^2 - 2x - 7$  and  $g(x) = 5x - 7$ ; find the following.

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

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

$$25x^3 - 45x^2 - 2$$

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C) 1) If  $f(x) = x^3 + 3$  and  $g(x) = 8x + 15$ ,  
find  $\frac{g(2)}{f(2)}$ .

$$\frac{15}{11} \text{ or } 1$$

D) If  $f(x) = 2x + 9$  and  $g(x) = 2x - 1$ ,  
find  $f(-1) \cdot g(-1)$ .

i)  $f(-1) \cdot g(-1)$

$$28$$

E) 1) Which of the following represents  $\left(\frac{g}{f}\right)(x)$ , if  $f(x) = -14$  and  $g(x) = -7x^2$ ?

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