6.3b Composition of Functions

(A) Add Functions

$$h(x) = f(x) + g(x)$$

(B) Subt. Functions

$$h(x) = f(x) - g(x)$$

(C) Multiply Functions

$$h(x) = f(x) \cdot g(x)$$

(D) Divide Functions

$$h(x) = \frac{f(x)}{g(x)}$$

$f(x) = 5x$ & $g(x) = x+2$. Find (A)-(D)

(A) ADD

$f(x) + g(x)$

$5x + x+2$

$6x+2$

(B) Subtract

$f(x) - g(x)$

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$5x - 1(x+2)$

$5x - 1x - 2$

$4x - 2$

(C) Multiply

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

$(5x) \cdot (x+2)$

$5x^2 + 10x$

(D) Division

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

$\frac{5x}{x+2}$

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Homework: Find A-D for each

① $f(x)=2x+4$; $g(x)=4x+7$

+A:

−B:

*C:

÷D:

② Use $f(3)$ & $g(-1)$ to find A-D

A:

B:

C:

D:

③ Find $f(-2)$ & plug answer in g

④ Find $g(m-2)$ & plug answer in f

⑤ $f(x)=-3x+8$; $g(x)=x^2+4$

+A:

−B:

*C:

÷D:

⑥ Use $f(-2)$ & $g(-2)$ for A-D

A:

B:

C:

D:

⑦ Find $f(3)$ & plug answer in g

⑧ Find $g(m-2)$ & plug answer in f