

$$10) \left( \frac{3nm^2 - 3n^2}{3m^{-2}} \right)^3 =$$

$$\left[ nm^2(-3)n^2 \right]^3$$

$$\left[ n^5 m (-3) \right]^3$$

$$(-3)^3 m^3 n^{5(3)}$$

$$-27 m^3 n^{15}$$

$$\frac{yzx^2}{-3xy^3z^{-3} \cdot (3x^0y^2)^3 \cdot y^3z^{-3}} = \frac{z^7x}{81y^{11}}$$

$$\frac{yzx^2}{-3xy^3z^{-3} \cdot (3x^0y^2)^3 \cdot y^3z^{-3}}$$

Handwritten annotations in the image include: a red 'z^3' above the denominator, a green 'yzx^2' above the numerator, a red 'z^3' above the denominator, a red circle around 'z^{-3}', a green circle around 'y^2', a black circle around '(3x^0y^2)^3', and a red circle around 'z^{-3}'.

$$\frac{z^7x}{-3 \cdot y^2y^3z^3 \cdot y^6}$$


---


$$\frac{xz^7}{81y^{11}}$$

Perform the indicated operation.

1)  $g(x) = 2x + 3$   
 $f(x) = 4x - 4$   
Find  $g(3) + f(3)$   
17

3)  $h(t) = 3t + 2$   
 $g(t) = t + 4$   
Find  $(h - g)(-5)$   
-12

5)  $g(x) = x^2 + 3$   
 $f(x) = 4x - 4$   
Find  $g(9) + f(9)$   
116

7)  $f(x) = x + 2$   
 $g(x) = x^2 + 2$   
Find  $(f - g)(4)$   
-12

9)  $g(x) = 4x - 2$   
 $h(x) = x - 2$   
Find  $(g \cdot h)(-3)$   
70

2)  $g(x) = 4x + 1$   
 $f(x) = x^2 + x$   
Find  $g(-8) - f(-8)$   
-87

4)  $g(t) = 2t + 3$   
 $f(t) = 3t - 3$   
Find  $(g + f)(7)$   
35

6)  $g(n) = n^3 - n$   
 $h(n) = n + 3$   
Find  $(g + h)(-4)$   
-61

8)  $g(x) = x^3 - 5x^2$   
 $h(x) = -x + 4$   
Find  $g(-1) - h(-1)$   
-11

10)  $g(x) = -x^3 - 4x^2 - \frac{25}{19}$   
 $h(x) = 4x + 1$   
Find  $\left(\frac{g}{h}\right)(-5)$

-01

8)  $g(x) = x^3 - 5x^2$   
 $h(x) = -x + 4$   
Find  $g(-1) - h(-1)$   
-11

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

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

$$(-1)^3 - 5(-1)^2 + -1 - 4$$

$$-1 - 5 + -1 - 4$$

$$\underbrace{-1 - 5}_{-6} + -1 - 4$$

$$\underbrace{-6 + -1}_{-7} - 4$$

$$-7 - 4$$

$$-11$$

7)  $f(x) = x + 2$   
 $g(x) = x^2 + 2$   
Find  $(f - g)(4)$

9)  $g(x) = 4x - 2$   
 $h(x) = x - 2$   
Find  $(g \cdot h)(-3)$

8)  $g(x) = x^3 - 5x^2$   
 $h(x) = -x + 4$   
Find  $g(-1) - h(-1)$

10)  $g(x) = -x^3 - 4x^2$   
 $h(x) = 4x + 1$   
Find  $\left(\frac{g}{h}\right)(-5)$

8)  $g(t) = t^3 - 4$   
 $f(t) = 2t + 3$   
Find  $g(-4x) \oplus f(-4x)$   
 $-64x^3 - 8x - 1$

$$\begin{aligned} & (-4x)^3 - 4 + 2(-4x) + 3 \\ & (-4)^3 x^3 - 4 + -8x + 3 \\ & -64x^3 - 8x - 1 \end{aligned}$$

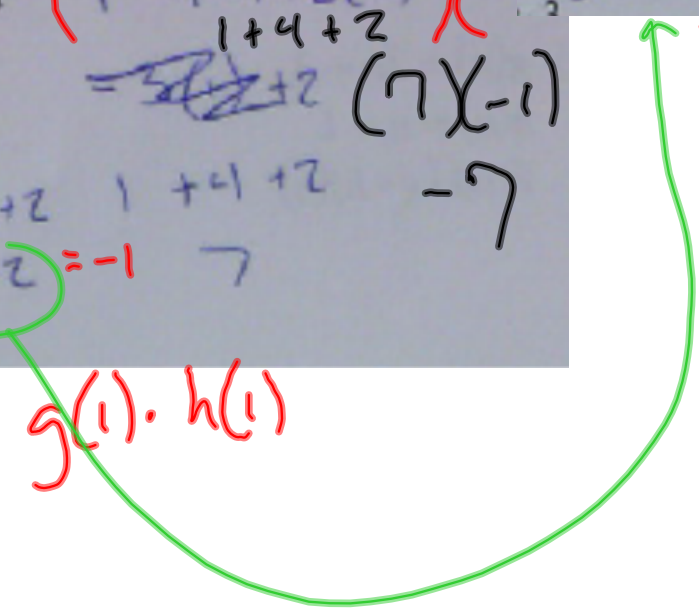
1)  $g(n) = n^2 + 4 + 2n$   
 $h(n) = -3n + 2$   
 Find  $(g \cdot h)(1)$

$(1^2 + 4 + 2(1))(-3 + 2)$   
 $= (1 + 4 + 2)(-3 + 2)$   
 $= 7(-1)$   
 $= -7$

$-3(1) + 2 = -3 + 2 = -1$

3)  $h(x) = 3x + 3$

$g(1) \cdot h(1)$



13)  $f(x) = 2x^3 - 5x^2$

$g(x) = 2x - 1$

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

$4x^4 - 12x^3 + 5x^2$

$$(2x^3 - 5x^2)(2x - 1)$$

$$4x^4 - 10x^3 - 2x^3 + 5x^2$$

$$4x^4 - 12x^3 + 5x^2$$



11)  $g(a) = -3a - 3$   
 $f(a) = a^2 + 5$   
Find  $(g - f)(a)$

$-a^2 - 3a - 8$

$-3a - 3 - (a^2 + 5)$

$-3a - 3 - a^2 - 5$

$-a^2 - 3a - 8$