



(1) sean  $f$  y  $g$  las funciones

$$f = \{(1, 4), (2, 5), (5, 8), (7, -2)\}$$

$$g = \{(2, 5), (1, -3), (5, 1), (6, 18), (7, 13)\}$$

Encontrar:  $(f \circ g)$  y  $[f \circ g]$

Domino  $x$

Rango  $y$

$$D_f = \{1, -2, 5, 7\}$$

$$D_g = \{2, 1, 5, 6, 7\}$$

$$D_g \cap D_f = \{3, -1, 10, 13, 7\}$$

$$R_f = \{4, 5, 8, -2\}$$

$$R_g \cap R_f = \{6, 2, 9, 16, 13\}$$

$$R_g = \{2, -3, 1, 10, 13\}$$

$$f \circ g = \{(3, 6), (-1, 2), (10, 4), (13, 16), (7, 13)\}$$

$$D_{f \circ g} = \{1, -2, 5, 7\}$$

$$R_{f \circ g} = \{4, 5, 8, -2\}$$

$$D_g \cap D_f = \{2, 1, 5, 6, 7\}$$

$$R_g \cap R_f = \{2, -3, 1, 10, 13\}$$

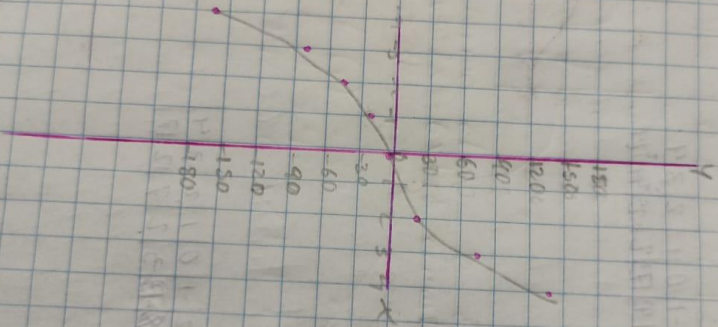
$$D_{f \circ g} = \{2, -2, 25, 42, 7\}$$

$$R_{f \circ g} = \{8, -15, 8, -30, 13\}$$

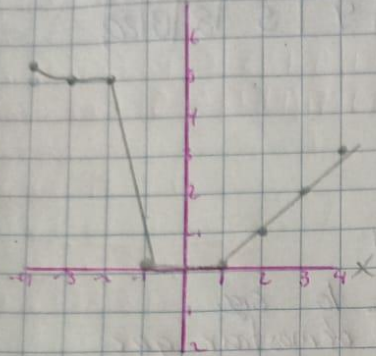
$$f \circ g = \{(2, 8), (-2, -15), (25, 8), (42, -36), (7, 13)\}$$

$$C) Y = 3x^2 - 8$$

Domino	X	4	3	2	1	0	1	2	3	4
Rango	Y	152	89	44	17	8	17	44	89	152



	$(x^2-1)$	$(x+1)$								
Domino $x$	-4	-3	-2	-1	0	1	2	3	4	5
Rango $y$	5	6	5	0	-1	0	1	2	3	



2. Dada la función  $f$  y  $g$  tales que se hayan  
 $f(x) = 3x - 2$  y  $g(x) = x^2 + 4$ . Hallar  $(f \circ g)$  y  $(g \circ f)$

$$f(x) = 3x - 2$$

$$f \circ g(x)$$

$$f(x) \circ g(x)$$

$$f(x) \circ g(x) = (3x - 2) + (3x + 4 \cdot 5) = f(x) + g(x) = x^2 + 5x + 2$$

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

$$f(x) = 2x - 5$$

$$f \circ g(x)$$

$$f(x) + g(x) = (2x - 3) + (4x^2 + x)$$

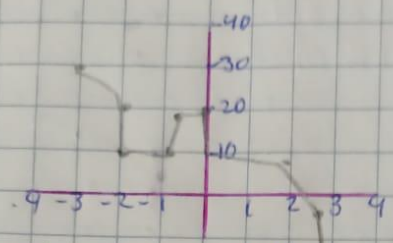
$$4x^2 + 3x - 3$$

$$8x^3 + 2x^2 - 12x^{1/2} - 3x$$

$$= 8x^2 - 10x^2 - 3x$$

Dominio	x	-4	-3	-2	-1	0	1	2	3	4
Rango	y	-14	4	-8	-5	-2	1	4	7	10

Dominio	x	-4	-3	-2	-1	0	1	2	3	4
Rango	y	-2	-5	0	3	4	5	8	13	20



3. Resuelve de forma clara lo sig.

A) Dadas  $F(x) = x^3 - 7x^2 - 6x + 42$  demostrar que

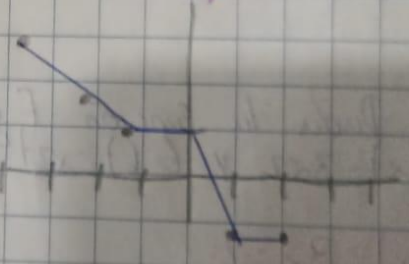
$F(7) = 0$  y  $F(1) = 30$

$F(7) = 0$  ✓

$F(1) = 1^3 - 7(1)^2 - 6(1) = 30$

$F(7) = 7^3 - 7(7)^2 - 6(7) = 42$

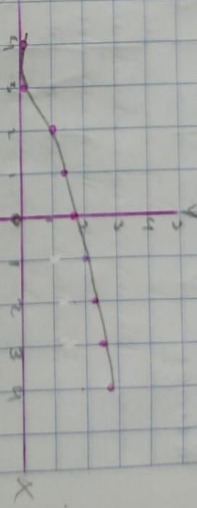
$343 - 343 - 42 + 42 = 0$  ✓



Instrucciones: Dadas las siguientes funciones encuentra la gráfica, el dominio y el rango

A)  $y = \sqrt{x+3}$

Dominio (x) | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4  
 Rango (y) | 0 | 0 | 1 | 1.43 | 1.73 | 2 | 2.25 | 2.44 | 2.64



$y = \sqrt{4+3} = 0$   
 $y = \sqrt{-3+3} = 0$   
 $y = \sqrt{-2+3} = 1$   
 $y = \sqrt{-1+3} = 1.43$   
 $y = \sqrt{0+3} = 1.73$   
 $y = \sqrt{1+3} = 2$   
 $y = \sqrt{2+3} = 2.23$   
 $y = \sqrt{3+3} = 2.44$   
 $y = \sqrt{4+3} = 2.64$

B)  $y = 5x - 3$

Dominio x | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4  
 Rango y | -23 | -18 | -13 | -8 | -3 | 2 | 7 | 12 | 17

$y = (-4) - 3 = -7$   
 $y = (-3) - 3 = -6$   
 $y = (-2) - 3 = -5$   
 $y = (-1) - 3 = -4$   
 $y = (0) - 3 = -3$   
 $y = (1) - 3 = -2$   
 $y = (2) - 3 = -1$   
 $y = (3) - 3 = 0$   
 $y = (4) - 3 = 1$

