$$x + 7 = 8y^3$$

$$\frac{x+7}{8} = 3^3$$

$$\frac{3}{8} = y$$
 (take cube root)

So,
$$y = \sqrt{\frac{x+7}{8}}$$

Step 4: Replace y by f (x)

$$f^{-1}(x) = \frac{3}{8}$$

Choice : A

(12) Pick one function, find the inverse to see whether

one of the remaining two would be its inverse

Say, we pick g(x) = 2x - 3.

Step 1: Replace g(x) by y: y=2x-3

Step 2:	Swap	x and	ч :	x = 24	-3
			Q	d	

$$\frac{x+3}{2} = y$$

$$g^{-1}(x) = \frac{x+3}{2}$$

This matches with the formula of h(x)

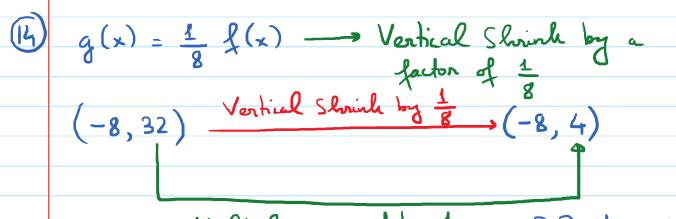
So, g(x) and h(x) are inverses of one

13)
$$y = x^3$$
 5.3 to the night $y = (x - 5.3)$
Replace x by

x - 5.3

(multiply by 0.6

$$y = 0.6 (x - 5.3)^3$$



Multiply y-cound by $\frac{1}{8} \rightarrow 32 \cdot \frac{1}{8} = 4$

Ans wer: (-8,4)

To find domain: Set x - 10 >0

x > 10

10

Answer: (10,00)

(16)
$$f(x) = -4x - 8$$
; $g(x) = 4x^2 - 8x + 8$

$$\left(f \circ g \right) \left(-3 \right) = f \left(g \left(-3 \right) \right)$$

$$= 4.9 + 24 + 8$$

Than plug 68 into f:

$$f(68) = -4(68) - 8 = -280$$

Ennay.

$$f(x) = 4x^2 + 3x + 5$$
; $g(x) = 3x - 3$.

Tuesday, March 3, 2020 10:34 AM $g(f(x)) = 3(4x^2+3x+5) - 3$ f(x) = 12x2+9x+15 -3 (Distribute) = 12x2 + 9x + 12 (Combine like $f(x) = \frac{5x+1}{6}$ Find inverse Step 1: Replace f(x) by y $y = \frac{5x + L}{6}$ Step 2: Swap x and y $x = \frac{5y+1}{4}$ Step 3: Solve for y. 6 x = 5y + 1 (Multiply both rides by 6) $6x-1=5y\rightarrow \frac{6x-1}{5}$ S_0 , $y = \frac{6x-1}{5}$

Step 4: Replace y by $f^{-1}(x)$ $f^{-1}(x) = \frac{6x-1}{5}$