Name: 7) f(x)=6x x= by c)yes Homework: Skills and Applications

f"(x) = \$ Finding an inverse Function Informally In Exercises 7–12, find the inverse function of *f* informally. VIs the inverse a function? Poes f(x) pass the horizontal line test? f(x) = 3x+1 6) yes 7. f(x) = 6x8. $f(x) = \frac{1}{3}x$ **10.** $f(x) = \frac{x-1}{5}$ 9. f(x) = 3x + 1

11. $f(x) = \sqrt[3]{x}$ 12. $f(x) = x^5$

Verifying Inverse Functions In Exercises 13-16, verify that f and g are inverse functions.

13. $f(x) = -\frac{7}{2}x - 3$, $g(x) = -\frac{2x + 6}{7}$ **14.** $f(x) = \frac{x-9}{4}$, g(x) = 4x + 9**15.** $f(x) = x^3 + 5$, $g(x) = \sqrt[3]{x-5}$ **16.** $f(x) = \frac{x^3}{2}$, $g(x) = \sqrt[3]{2x}$

$$(3 + \frac{2}{2}(+2) + \frac{1}{2}) - 3$$

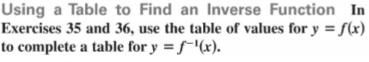
 $(+(2) + \frac{1}{2}) - 3$
 $(+(2) + \frac$

$$= \frac{7 \times 76}{7}$$
$$= \frac{1 \times 712}{7}$$

= X + 1

 \mathbb{T}

not inverses both must equal x



0

2

5

1

2

f(x) =

c) yes

(12)

b) yes

c)yes

 $\langle \chi \rangle$

(3) $F(x) = \frac{1}{3}x$ (3) $x = \frac{1}{3}y(\frac{3}{7})$

 $(D)^{2}f(x) = x - 1$

(x)=5x+1

35.	x	-2	-1	0	1	2	3
	f(x)	-2	0	2	4	6	8

36. х f(x)

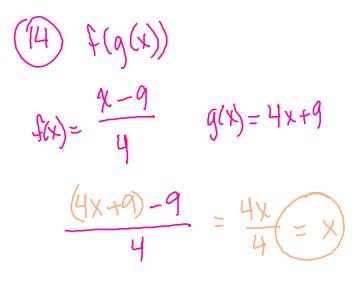
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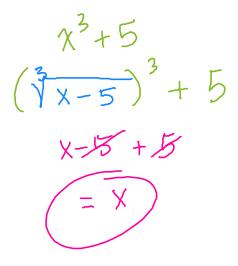
-1

-10-7-4-1

2 -1 D 3 D ſ



$$\begin{array}{c} \hline 15 \\ \hline 5 \\ f(x) = x^{3} + 5 \\ g(x) = \sqrt{x - 5} \end{array}$$



q(f(x))4x+9 yes-inverse $4\left(\frac{x-q}{4}\right)+9$ X-9+9 (= X)q(f(x))×-5 5 (x3+5)-5 yes-V X3 = x

