$$f(v) = \sqrt{x} + 1$$

$$g(v) = \sqrt{x} + 1$$

$$g(v) = \sqrt{x} + 1 \Rightarrow 2 + 1 \Rightarrow 2 + 1 \Rightarrow 2$$

$$x = (8) \Rightarrow f(8) = \sqrt{x} + 1 \Rightarrow 2 + 1 \Rightarrow 2$$

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$$x = (8) \Rightarrow f(8) = \sqrt{x} + 1 \Rightarrow 2 + 1 \Rightarrow 2$$

$$x = (9) \Rightarrow f(8) = \sqrt{x} + 1 \Rightarrow 2 + 1 \Rightarrow 2$$

$$x = (1) = 1 - 1$$

$$f(7) = 1 - 1$$

$$f(7) = 1 - 1$$

$$f(7) = 3$$

$$f(7) = 3$$

$$f(7) = 3$$

$$f(7) = 3$$

$$f(1) = (1) + 4 + 15$$
 $f = (1,5)$
 $f^{-1} = (5,1)$

いいいもし、いちに自体なない場合にはなることには

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

Let
$$f(x) = x^{2} - 1$$
, $k \ge 1$. Find $f'(x)$

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

$$y = x^{2} - 1$$

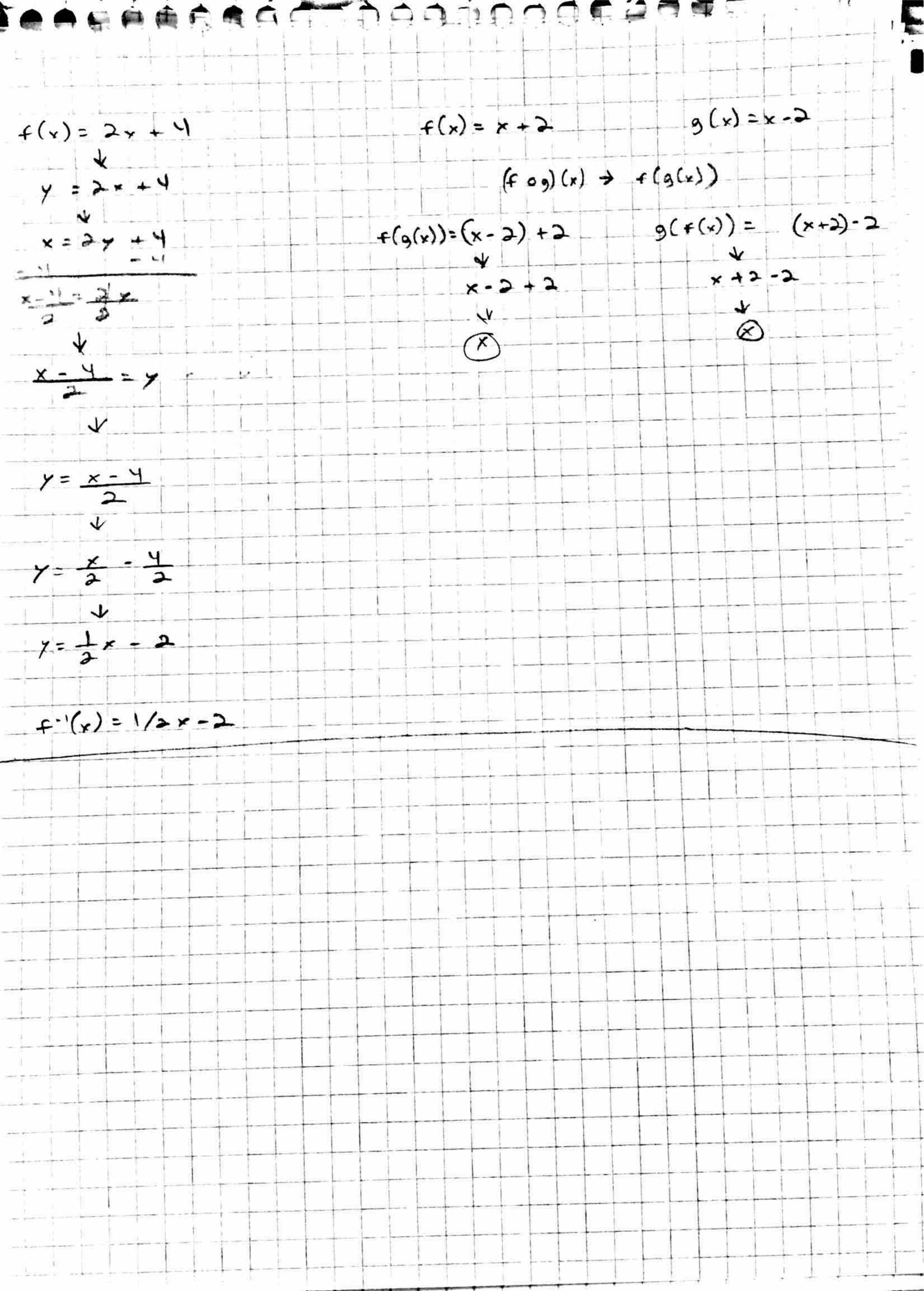
$$y = y^{2} - 1$$

$$y = y^{2} + 1$$

$$\sqrt{x+1} = y$$

$$y = \sqrt{x+1}$$

$$f''(y) = \sqrt{x+1}$$
, $x \ge 1$



Prove $f(x) = x^2$ and $g(x) = \sqrt{x}$ are Inverses

of Each Other

ファラックラクラ

1) Domain of f(x): (-00,00)

Domain of g(x): x 20

$$\varphi(x) = 2 \times x + 5$$
 $g(x) = \frac{x-5}{2}$

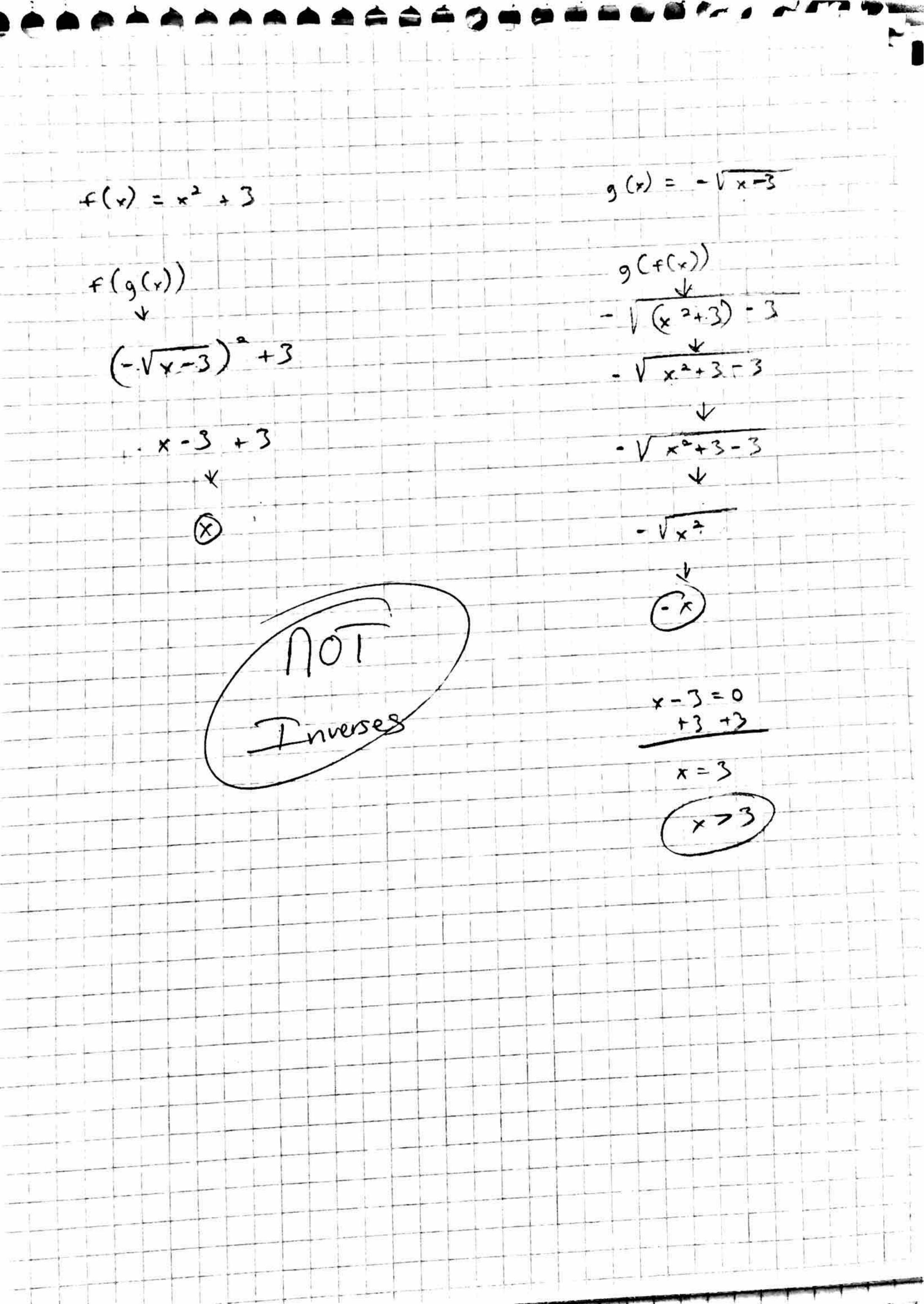
$$f(g(x))$$
 $f(g(x))$
 $g(f(x))$
 $g(x)$
 $g(x)$
 $g(x)$
 $g(x)$

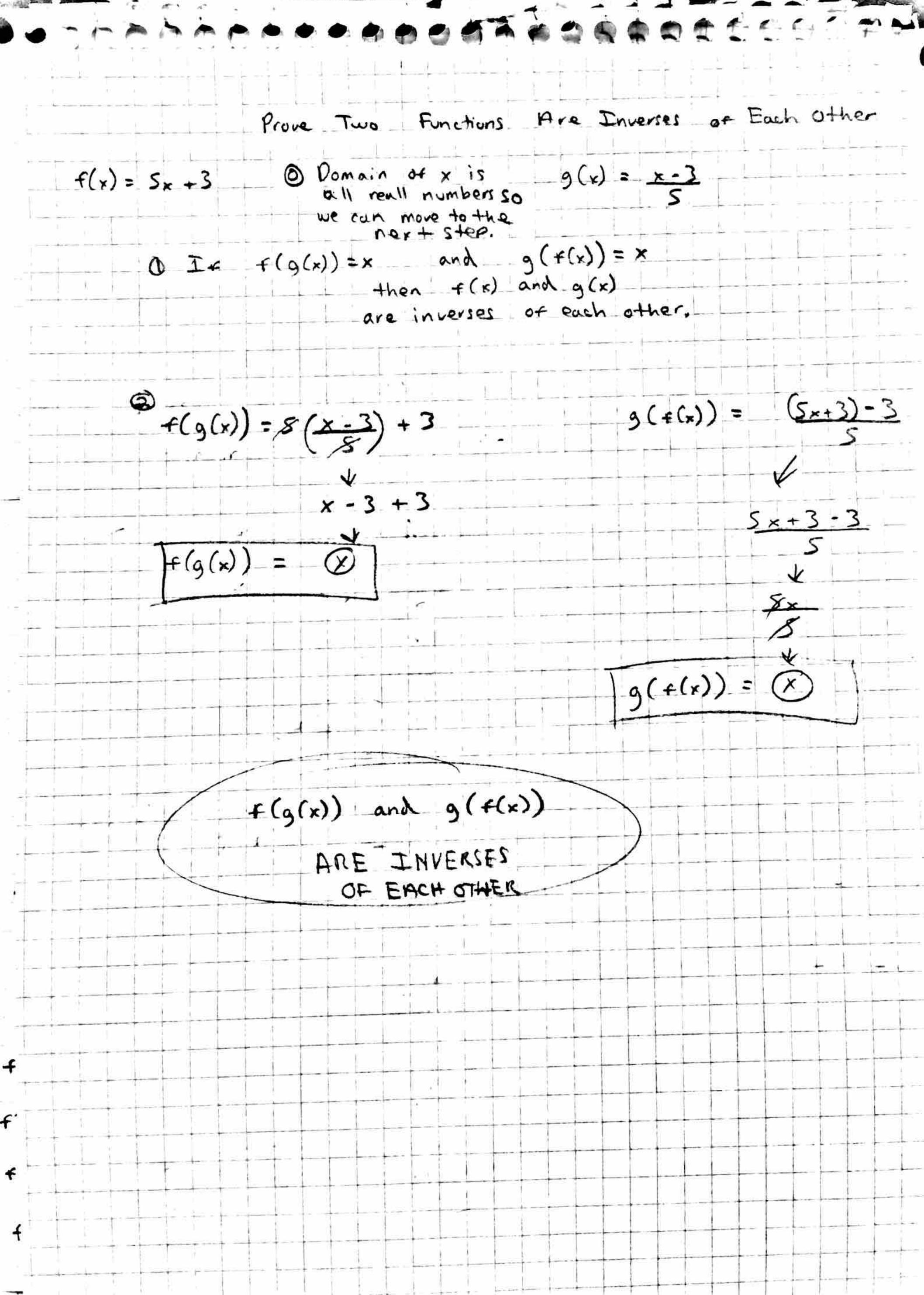
$$\begin{pmatrix} x - S \\ 2 \end{pmatrix} + S$$

$$\times \cdot S + S$$

$$\times \cdot S + S$$

$$\begin{pmatrix} 2x + S - S \\ 2x + S + S \\ 2x + S +$$





each other

g(x) = Vx are not inverse functions or

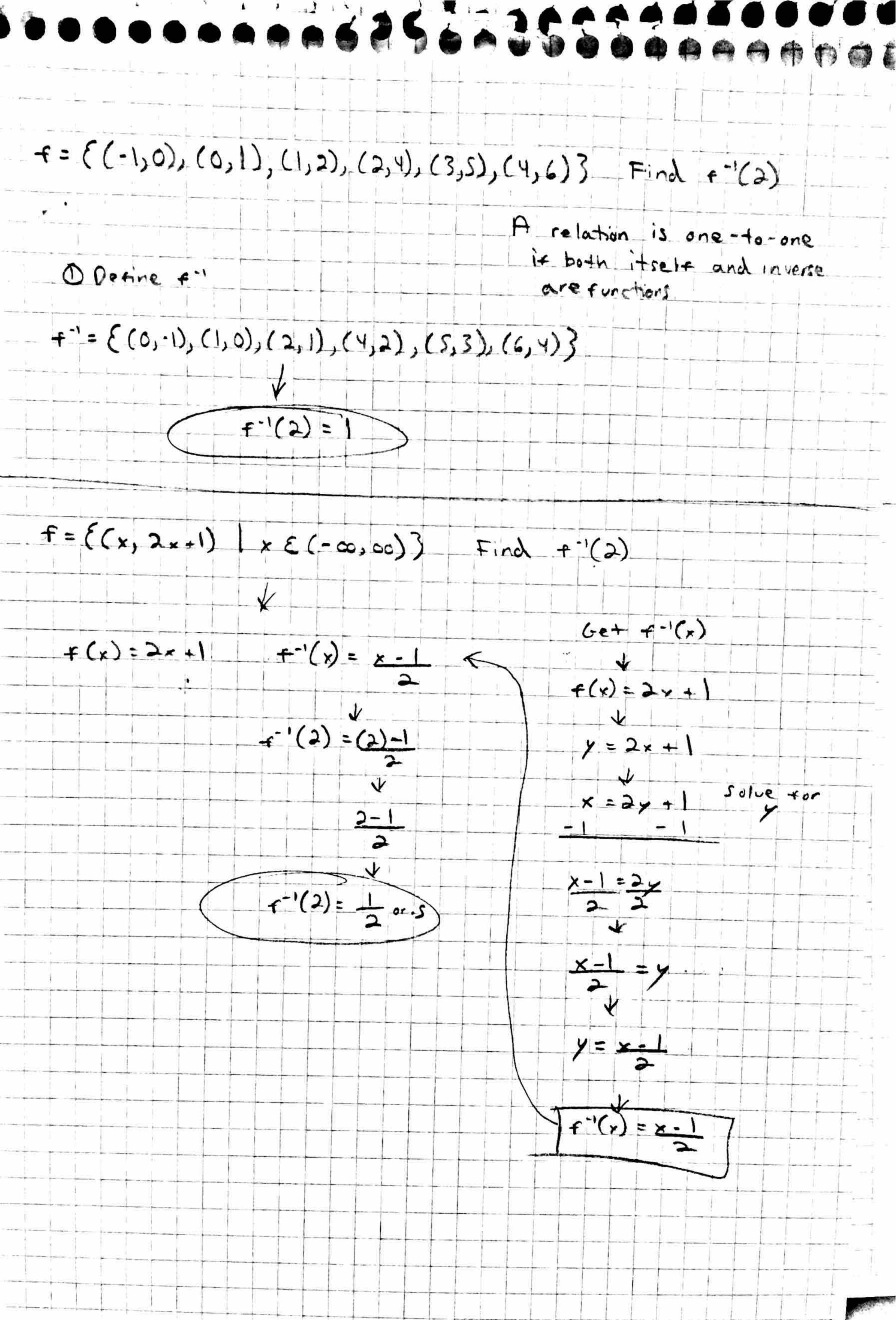
9(x)=Vx Pomain (0,00)

O Define
$$f(x)$$

$$f(x) = x + 4$$

$$f(-3) = (-3) + 4 = (1)$$

 $f(f^{-1}(1)) = 1$



$$R = \{(0,0), (1,2), (2,3), (3,3)\}$$

Domain Range

Range Comain

 $R^{-1} \{(0,0), (2,1), (3,2), (3,3)\}$

¥

$$R = \{(0,1),(1,2),(2,-1),(3,4)\}$$

$$R^{4} = \{(1,0),(2,1),(-1,2),(4,3)\}$$

Domain R Range R.

{0,1,2,33}
{1,2,-1,43}

Domain R.1 E1, 2,-1,43

Mange R'

Domain R = Range R'
Domain R' = Range R

f= {(0,1),(1,2),(2,-1),(3,4)} Find f(-1), f(0), f(2), f-1(-1) f-1(1) Verify = f(f-1(-1)) = -1 and f-1(f(1))=1 D f = ((0,1), (1,2), (2,-1), (3,4)3 4-1= {(1,0), (2,1), (-1,2), (4,3)} f (-1) = undef f (f-1(-1))=1 -> f (f-1(x))= f Domain & values f(0)= 1 f (2) = (D +(2)=-1 f - '(f(1)) = 1 -> . f - '(f(x)) = f - ' Domain(x) values f -1(-1) = 2 f -1(2) = f -1(1) = 0

Let
$$+(x) = 6x + 5$$
 Find $+(x)$

$$4^{-1}(x) = \frac{4x-5}{6}$$

of the decision of the decisio