

5. Below is Relation R

X	1	2	3	4
Y	-1	3	-1	0

a. Find the inverse of Relation R.

X	-1	3	-1	0
Y	1	2	3	4

b. Is the Relation a function? Is the inverse of relation R a function?

yes, No

6. Find the inverse of the following functions,

a. $y = \frac{x-1}{2}$

$$x = \frac{y-1}{2}$$

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

$$2x = y-1$$

$$2x+1 = y$$

b. $y = \sqrt{x}+4$

$$x = \sqrt{y}+4$$

$$y^{-1} = (\sqrt{x}-4)^2$$

$$x-4 = \sqrt{y}$$

$$(x-4)^2 = y$$

c. $f(x) = 3x^2+2$

$$y = 3x^2+2$$

$$x = 3y^2+2$$

$$x-2 = 3y^2$$

$$\frac{x-2}{3} = y^2$$

$$\pm \sqrt{\frac{x-2}{3}} = y$$

$$y^{-1} = \pm \sqrt{\frac{x-2}{3}}$$