

Transformations Quiz 35

1) Find the domain and range.

a) $(-2, 0), (-1, 1), (0, 2), (1, 1), (2, 0)$

b) $-y = x^2$

c) $y = \sqrt{-x}$

2) State which of the following relations is a function.

a) $(-3, 3), (0, 3), (3, 3), (5, 3)$

b) $x = |y|$

c) $(-2, 2), (-1, 1), (0, 0), (1, -1), (0, -2)$

3) Given the equation; $(y) = (x)^2$ find the new equations.

a) shift right 3 units

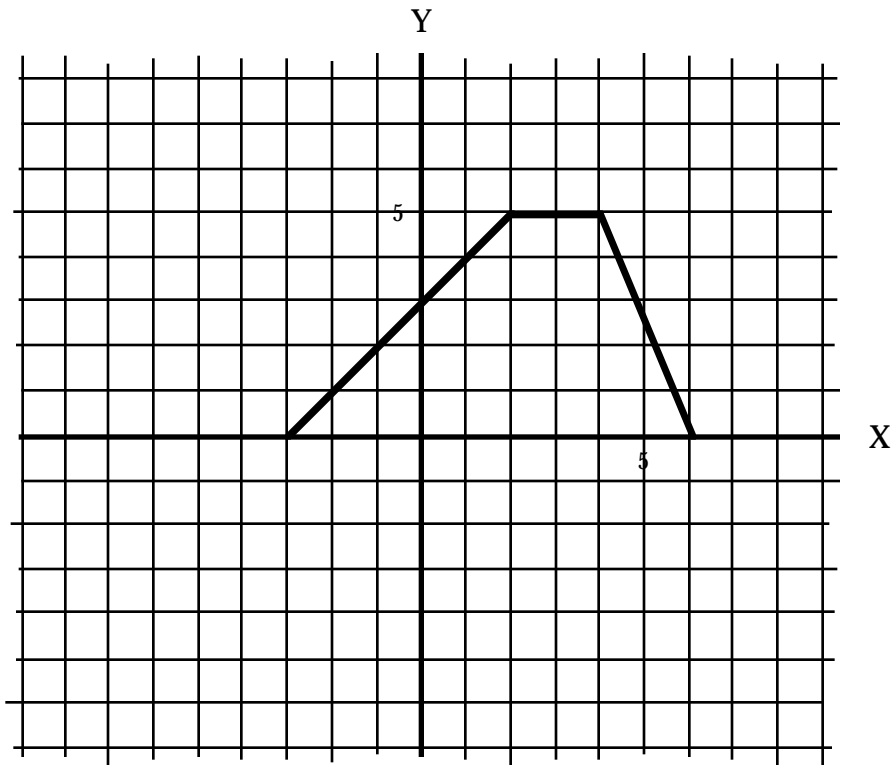
b) reflect about the y-axis

c) shift down 5 units

d) give the inverse relation

4) The following relation is

$y = f(x)$



Sketch the following relations:

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

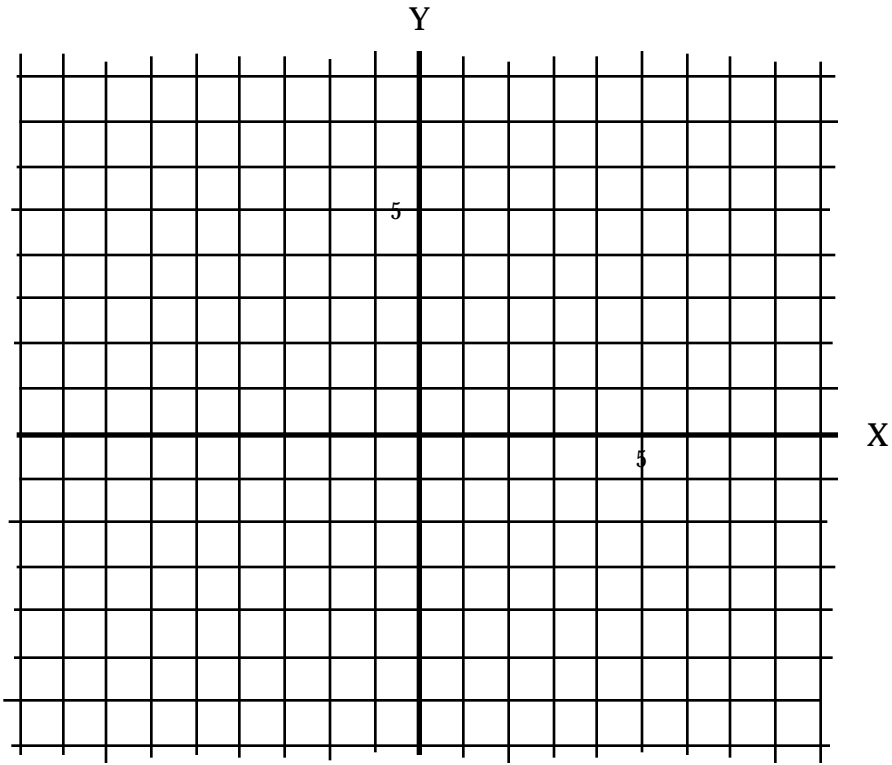
b) $y - 2 = f(x)$

c) $y = f(-x)$

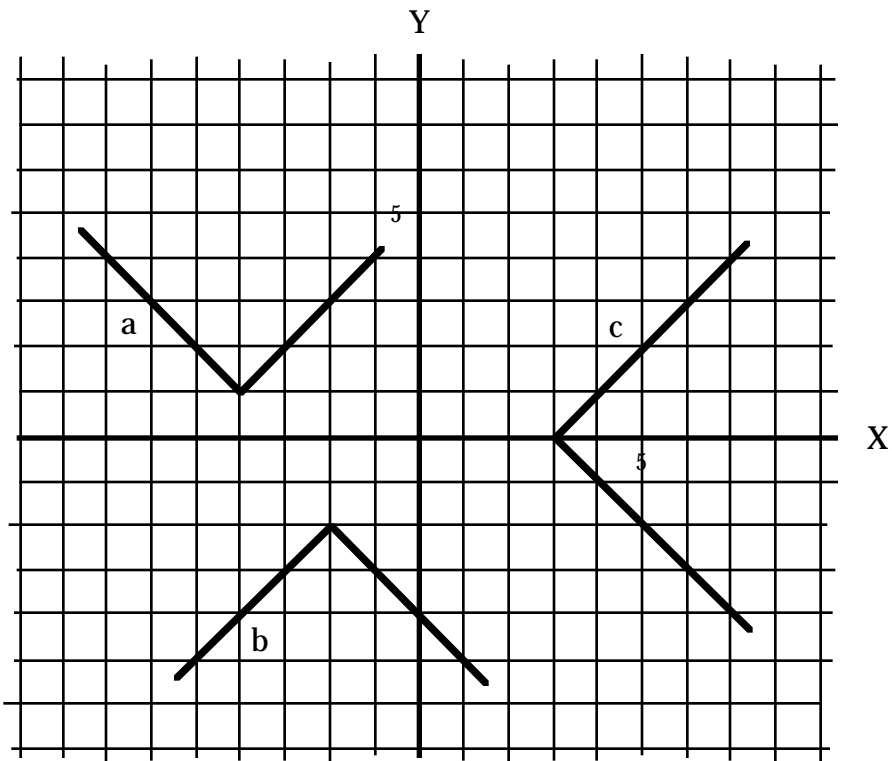
d) $-y = f(x)$

e) $y + 6 = f(x - 3)$

f) $x = f(y)$

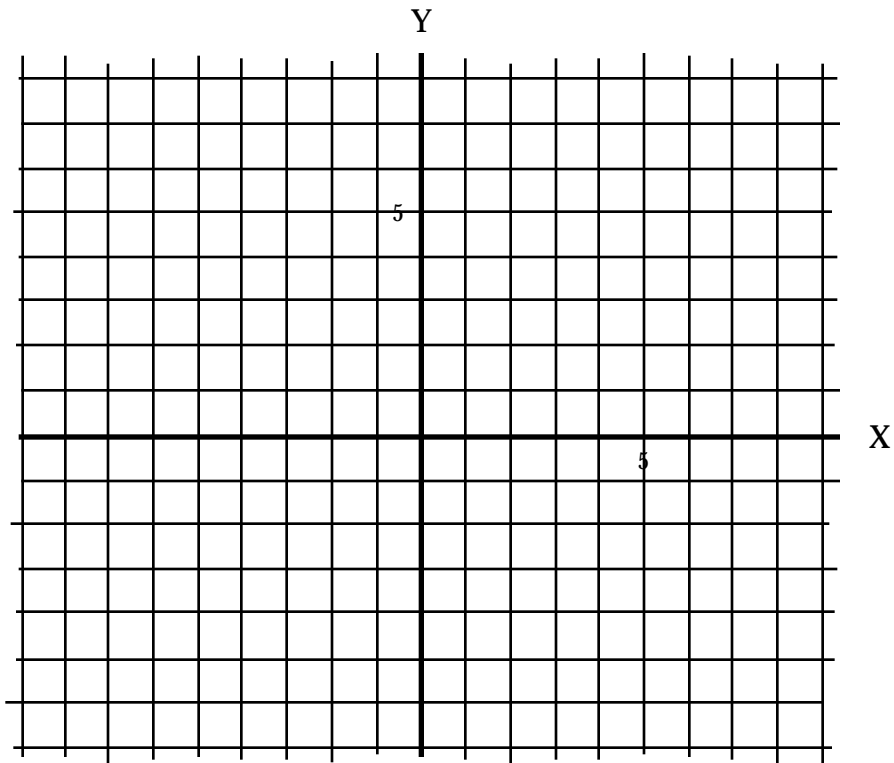


5) Write down the equations for the following transformations of $y = |x|$.

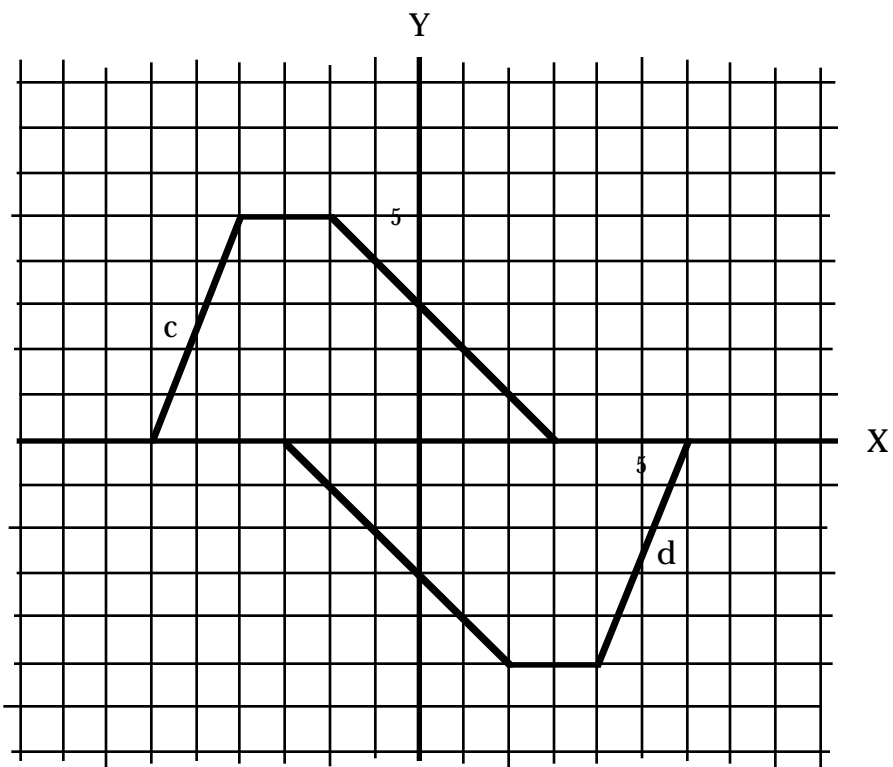
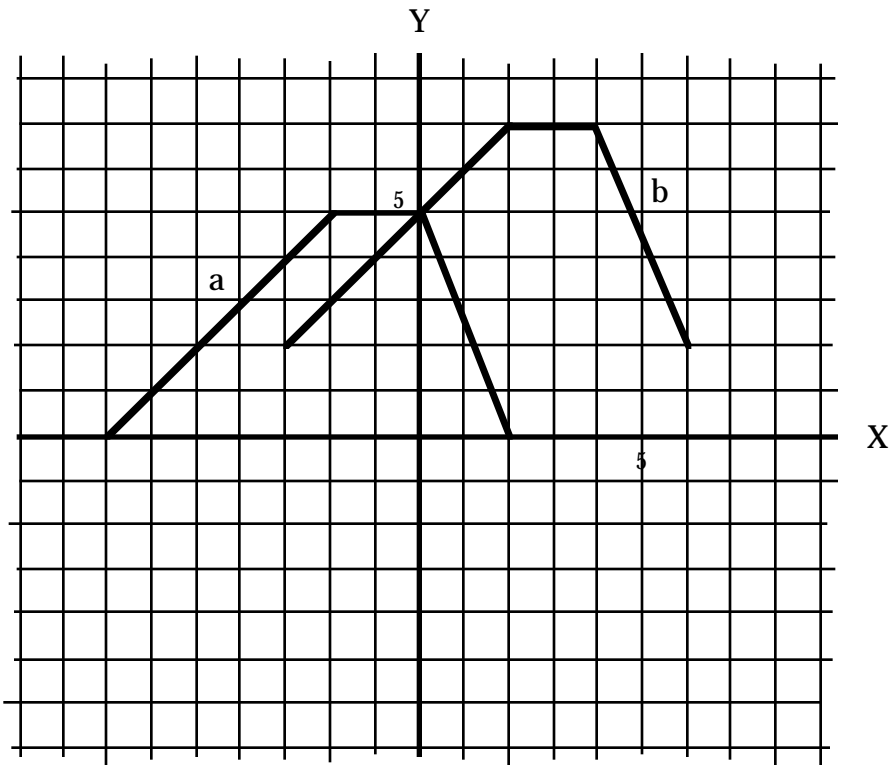


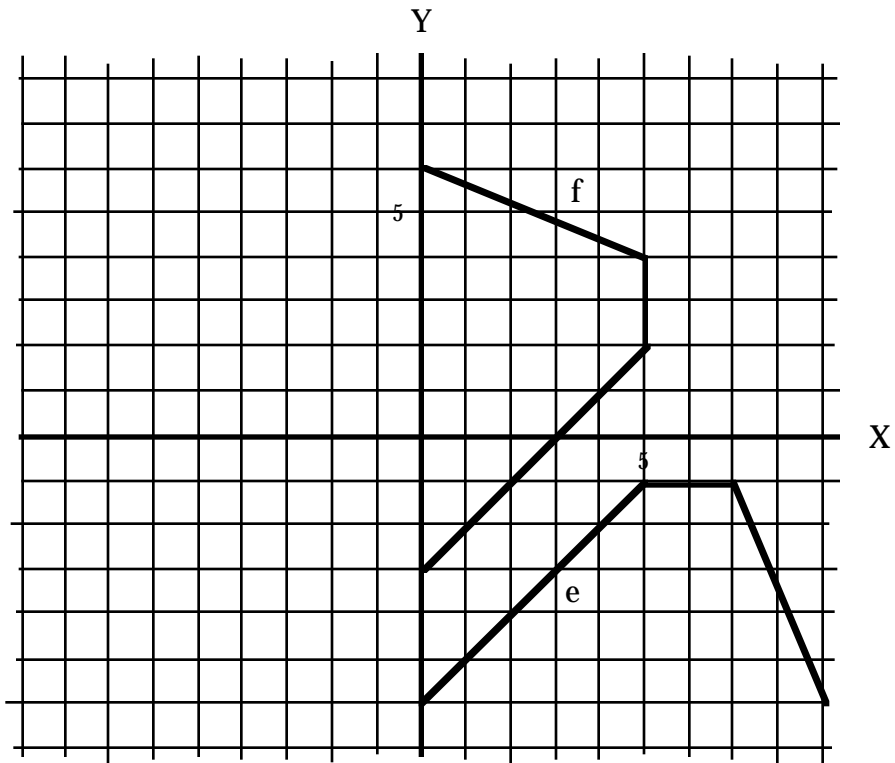
6) Sketch the graphs for the following relations.

a) $x = \sqrt{y + 5}$ b) $y - 4 = -(x - 6)^2$ c) $-(x + 3) = |y|$



Answers: 1)a) $D = \{-2, -1, 0, 1, 2\}$, $R = \{0, 1, 2\}$, b) $D = \{\text{Reals}\}$, $R = \{y \leq 0\}$, c) $D = \{x \leq 0\}$, $R = \{y \geq 0\}$, 2)a) Y, b) N, c) N, 3)a) $y = (x - 3)^2$, b) $y = x^2$, c) $y + 5 = x^2$, d) $x = y^2$, 4)





5)a) $y - 1 = |x + 4|$, b) $y + 2 = -|x + 2|$, c) $x - 3 = |y|$, 6)

