Worksheet on translations and function notation

Function	Parent Function	Translation	Function Notation	Where does each point move to?
1. $g(x) = x^2 + 5$				(0, 0)
2. $g(x) = |x + 2|$				(0, 0)
3. $g(x) = (x + 1)^2 - 3$				(0, 0)
4. $g(x) = \sqrt{x - 4} + 1$				(2, 5)
5. $g(x) = (x - 1)^3 + 2$				(-3, 1)
6. $g(x) = |x - 1| - 3$				(7, -6)
7. $g(x) = (x + 3)^2$				(-3, 0)
8. $g(x) = \sqrt{x + 2} - 6$				(-1, 4)

9. Now Graph $y = x + 5$ and see if you can see both the vertical and horizontal translation. The way it is written, it should only have a vertical translation, so why does also have a horizontal translation as well?

10. Suppose you a function $f(x)$ has been dilated and is now $g(x) = 2f(x)$. Does the factor of 2 affect the x-values, y-values, or both the x and the y-values?