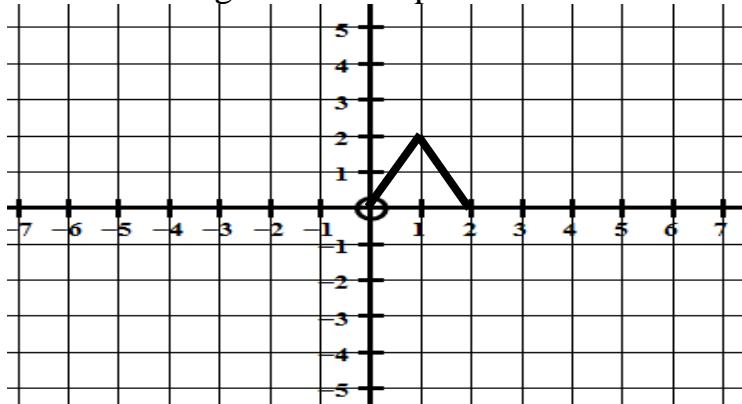


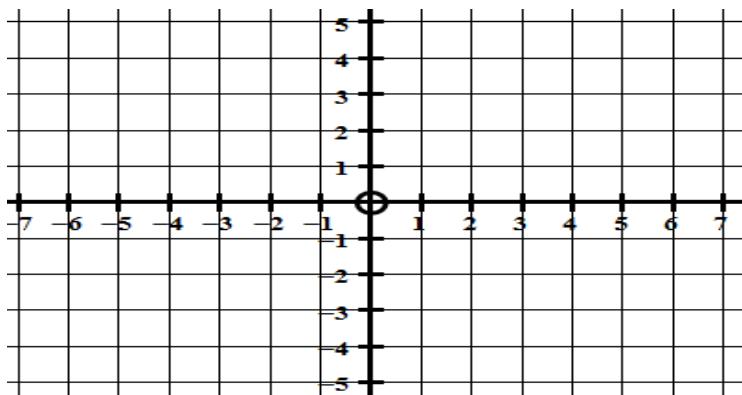
TRANSFORMATIONS OF GRAPHS.

Consider this general example of a function: we will call it $y = f(x)$

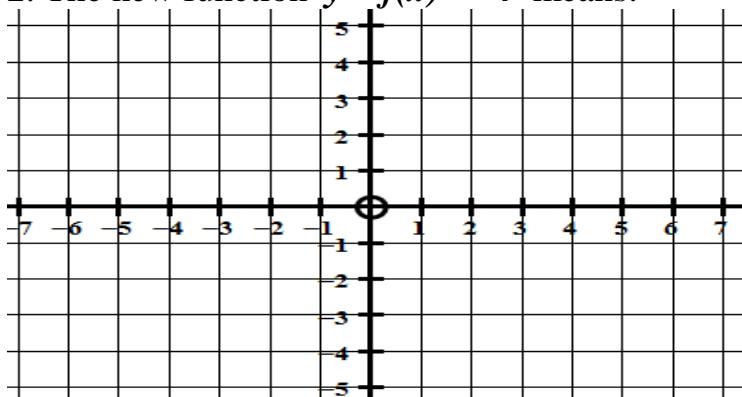


TRANSLATIONS:

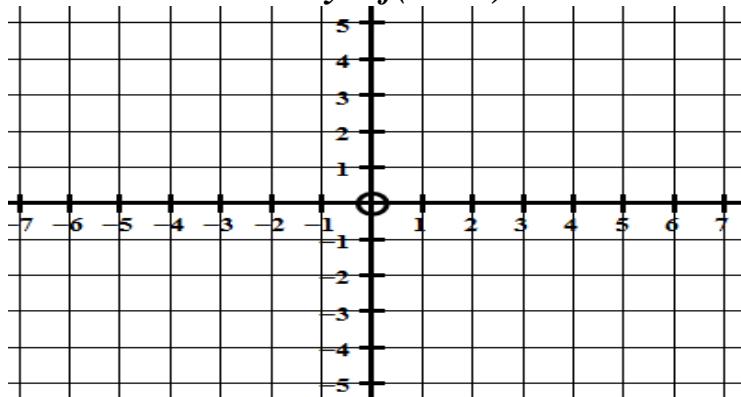
1. The new function $y = f(x) + 3$ means:



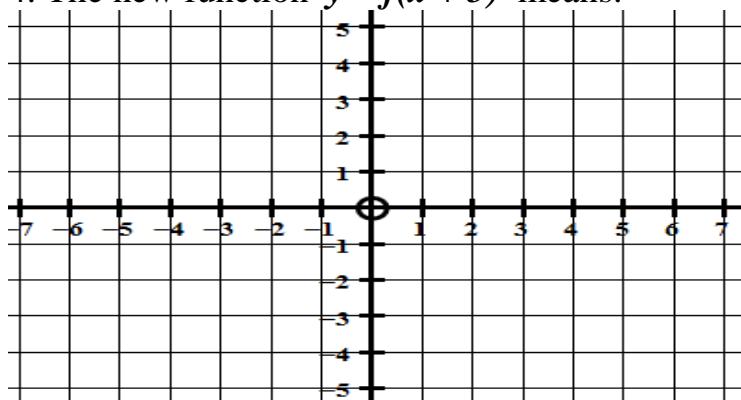
2. The new function $y = f(x) - 4$ means:



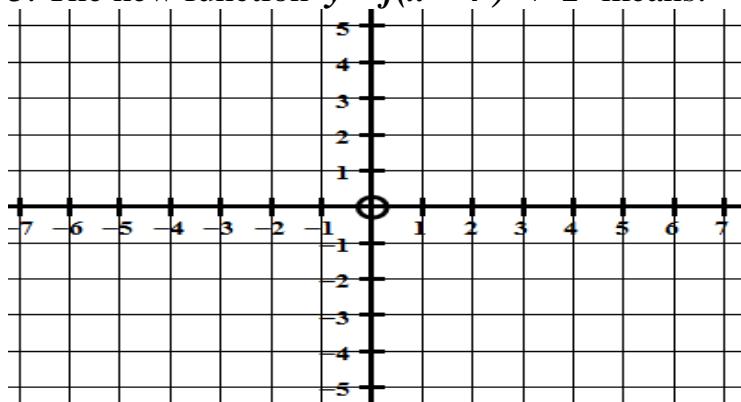
3. The new function $y = f(x - 3)$ means:



4. The new function $y = f(x + 5)$ means:

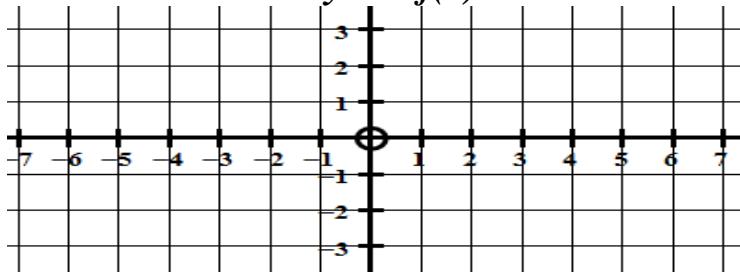


5. The new function $y = f(x - 4) + 2$ means:

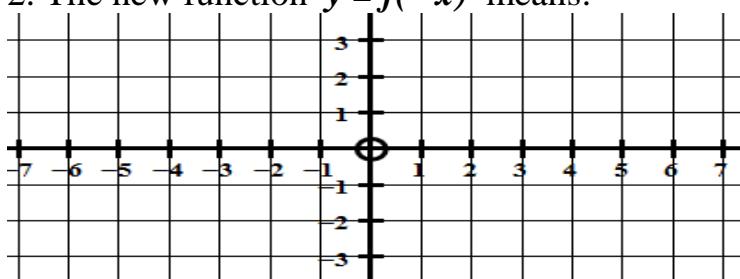


REFLECTIONS:

1. The new function $y = -f(x)$ means:

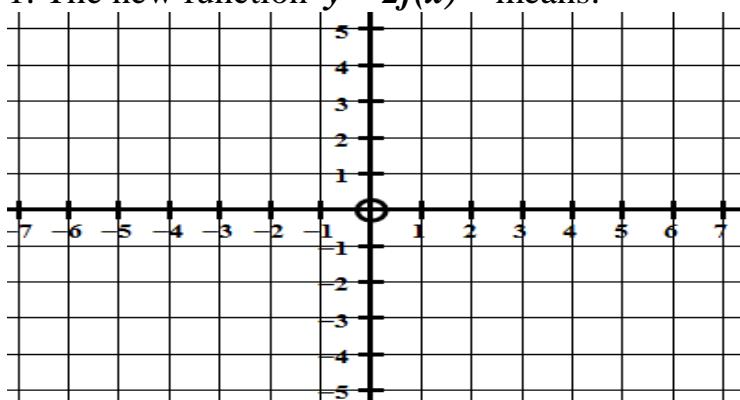


2. The new function $y = f(-x)$ means:



STRETCHING:

1. The new function $y = 2f(x)$ means:



2. The new function $y = \frac{1}{2}f(x)$ means:

