

1. Recap all the transformation rules

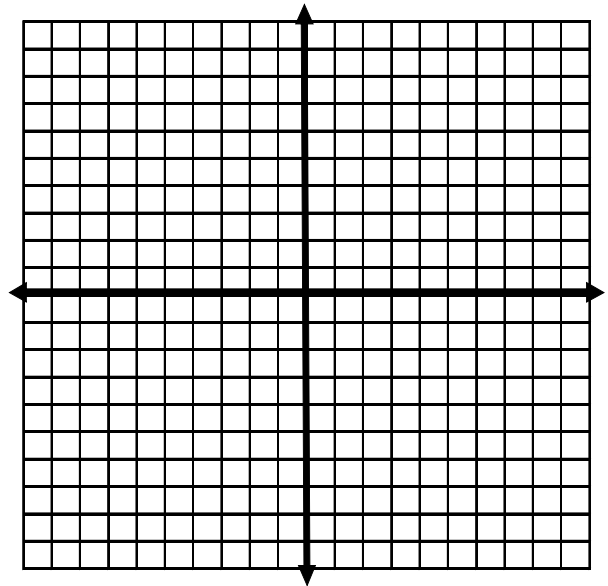
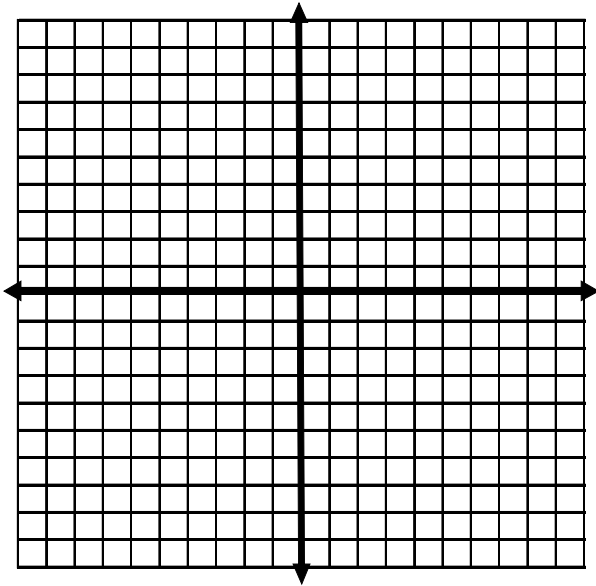
TRANSFORMATION RULES FOR FUNCTIONS	
EQUATION	HOW TO OBTAIN THE GRAPH
$y = f(x) + k$	
$y = f(x) - k$	
$y = f(x + h)$	
$y = f(x - h)$	
$y = af(x) \ (a > 1)$	
$y = af(x) \ (0 < a < 1)$	
$y = -f(x)$	

2. Given the function $f(x)$ and $h(x) = -4f(x - 1) + 12$, describe the transformations.
3. Given the function $f(x)$ and $g(x) = \frac{2}{5}f(x) + 17$, describe the transformations.
4. Given the function $y = (x - 1)^2 + 7$, describe the transformation to the new function $y = (x + 6)^2 - 2$

5. On the set of axes, graph both functions without a table of values. Use your knowledge of parent functions and transformations. Describe the transformations that take place.

a) $f(x) = x^3$ and $g(x) = (x - 4)^3 + 1$

b) $f(x) = \sqrt{x}$ and $g(x) = -\sqrt{x + 2} - 3$



6. Using your knowledge of the parent function $f(x) = |x|$, state the domain and range of a new function given by $g(x) = -|x + 1| - 4$

7. Given the function $f(x) = \sqrt{x}$ and $g(x) = -\sqrt{x - 1}$, determine if they will have the same domain and range. Explain your answer.