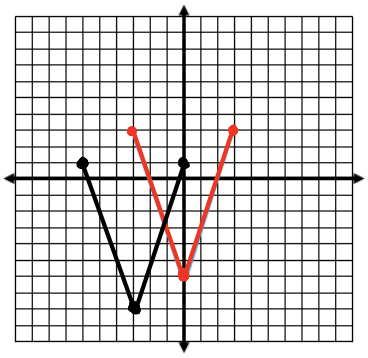
Math 2 **Name:** Key

Unit 2A Quiz 1 Review

Use the following function Victor, $V(x)$ to answer the questions 1-3



1. List the characteristic points of $V(x)$.

   (-3,3) (0,-6) (3,3)

2. What are the domain and range of $V(x)$?

   D: $-3 \leq x \leq 3$ R: $-6 \leq y \leq 3$

3. State the effect on Victor for $V(x+3)-2$. Then graph it on the coordinate grid with $V(x)$.

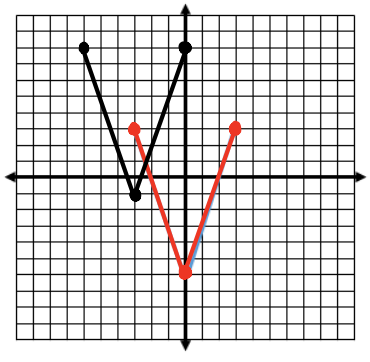
   shifted left 3 units & down 2 units

For each function, describe in words all of the transformations to the $P(x)$ in the order that they occur.

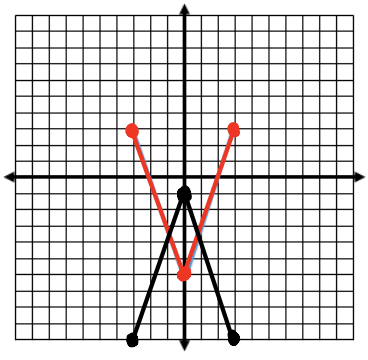
	Function	Transformations
4.	$y = P(x-3)+5$	shifted right 3 & up 5 units
5.	$y = \frac{1}{4}P(x+1)$	vertical shrink by $\frac{1}{4}$ & shifted left 1 unit
6.	$y = 7P(-x)-2$	vertical stretch by 7, reflection over y-axis, & shifted down 2 units
7.	$y = -4P(x-2)+11$	reflection over the x-axis, vertical stretch by 4, shifted right 2 & up 11 units

Graph each transformation on the coordinate grid with the parent function Maximus, $M(x)$.

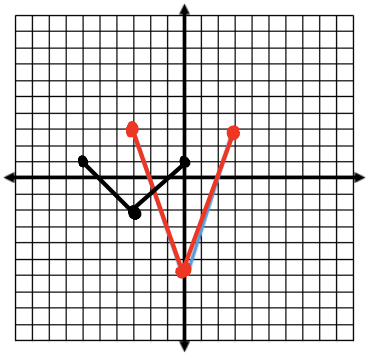
8. $y = V(x+3)+5$



9. $y = -V(x)-7$



10. $y = \frac{1}{3}M(x+3)$



11.	**Circle the correct term**: The domain is affected when a transformation is moved **left and right** or **up and down**
12.	Write the equation that would translate $F(x)$ 5 units up. $F(x) + 5$
13.	Write the equation that would translate $F(x)$ 8 units down and 6 units right. $F(x-6) - 8$
14.	Write the equation that would reflect $F(x)$ in the x-axis and vertically shrink by $1/6$ $-\frac{1}{6}F(x)$
15.	Write the equation that would reflect $F(x)$ in the y-axis and translate it 5 units down. $F(-x) - 5$
16.	Write the equation that would vertically shrink $F(x)$ by $1/5$ and translate down by 2 $\frac{1}{5}F(x) - 2$
17.	Write the equation that would reflect $F(x)$ in the x-axis, vertically shrink it by $1/3$ and translate it 2 units right and 4 units down. $-\frac{1}{3}F(x-2) - 4$
18.	If the domain and range of $P(x)$ are $D = 4 \leq x \leq 9$ and $R = -5 \leq y \leq -1$ what would be the domain and range of the transformed function $y = -P(x)$? $D: 4 \leq x \leq 9$ $R: 1 \leq y \leq 5$
19.	If the domain and range of $P(x)$ are $D = 4 \leq x \leq 9$ and $R = -5 \leq y \leq -1$ what would be the domain and range of the transformed function $y = 4P(x)$? $D: 4 \leq x \leq 9$ $R: -20 \leq y \leq -4$
20.	If the domain and range of $P(x)$ are $D = 4 \leq x \leq 9$ and $R = -5 \leq y \leq -1$ what would be the domain and range of the transformed function $y = 2P(x+3) - 4$? $D: 1 \leq x \leq 6$ $R: -14 \leq y \leq -6$