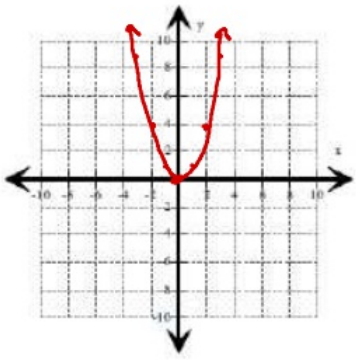
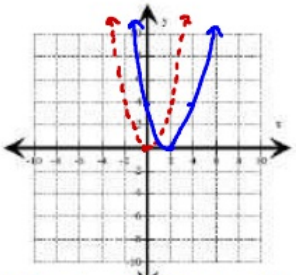
1. Draw the graph $f(x)=x^2$ 2. Give the functions Domain and Range



D: $(-\infty, \infty)$
R: $[0, \infty)$

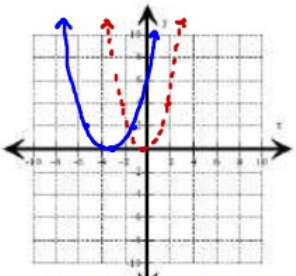
Graph each function below. Describe the translation of the parent function $f(x)=x^2$. Then give the functions Domain and Range

1. $f(x)=(x-1)^2$



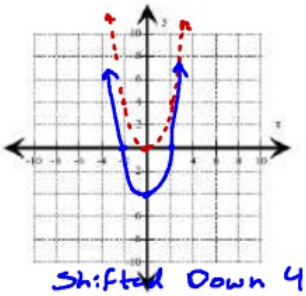
Shifted Right 1
D: $(-\infty, \infty)$
R: $[0, \infty)$

2. $f(x)=(x+3)^2$



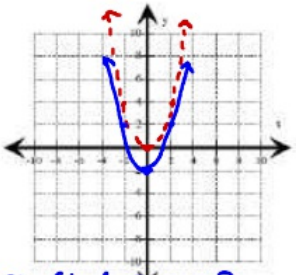
Shifted Left 3
D: $(-\infty, \infty)$
R: $[0, \infty)$

3. $f(x)=x^2-4$



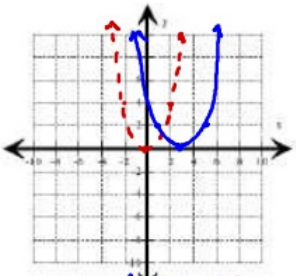
Shifted Down 4
D: $(-\infty, \infty)$
R: $[-4, \infty)$

4. $f(x)=x^2-2$



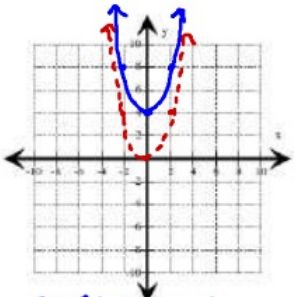
Shifted Down 2
D: $(-\infty, \infty)$
R: $[-2, \infty)$

5. $f(x)=(x-3)^2$



Shifted Right 3
D: $(-\infty, \infty)$
R: $[0, \infty)$

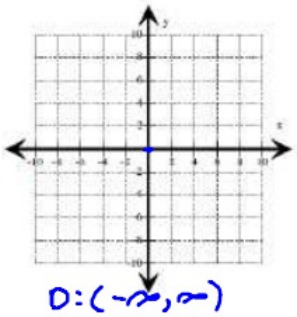
6. $f(x)=x^2+4$



Shifted up 4
D: $(-\infty, \infty)$
R: $[4, \infty)$

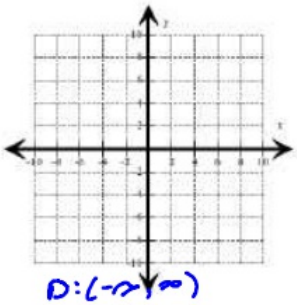
Graph each function below. Describe the translation of the parent function $f(x)=x^2$.
Then give the functions Domain and Range

1. $f(x)=(x-5)^2+2$



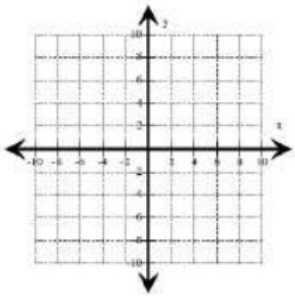
D: $(-\infty,\infty)$
R: $[2,\infty)$

2. $f(x)=(x+1)^2-3$

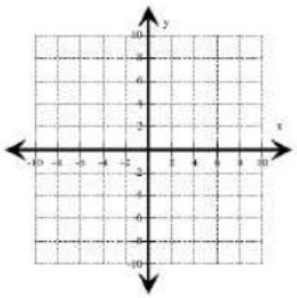


D: $(-\infty,\infty)$
R: $[-3,\infty)$

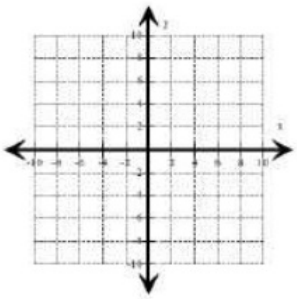
3. $f(x)=(x-2)^2+4$



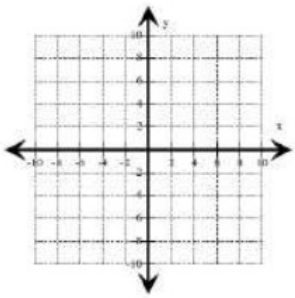
4. $f(x)=(x+4)^2+1$



5. $f(x)=(x-6)^2+2$



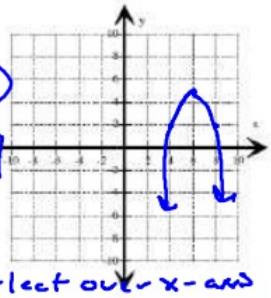
6. $f(x)=(x-3)^2-7$



Graph each function below. Describe the transformation of the parent function $f(x) = x^2$. Then give the functions Domain and Range

Reflect over x-axis

1. $f(x) = -(x-6)^2 + 5$

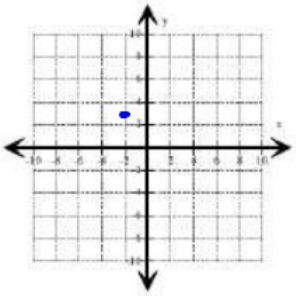


D: $(-\infty, \infty)$

R: $(-\infty, 5]$

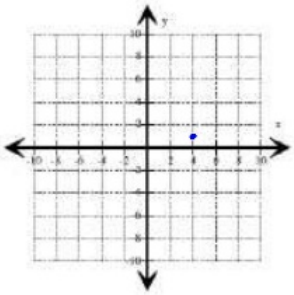
Reflect over x-axis
Shift Right 6
Shift up 5

2. $f(x) = (x+1)^2 + 3$

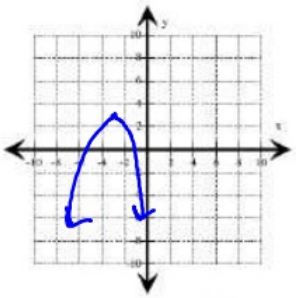


R: $[3, \infty)$

3. $f(x) = (x-4)^2 + 1$

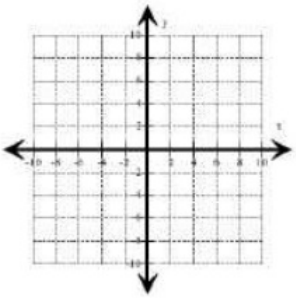


4. $f(x) = -(x+3)^2 + 3$

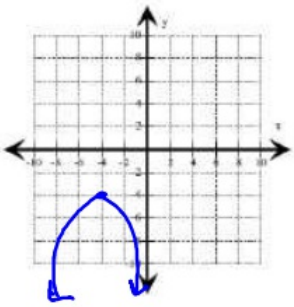


R: $(-\infty, 3]$

5. $f(x) = (x+2)^2 - 4$



6. $f(x) = -(x+4)^2 - 4$

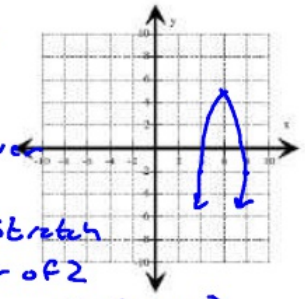


R: $(-\infty, -4]$

Graph each function below. Describe the transformation of the parent function $f(x)=x^2$. Then give the functions Domain and Range

1. $f(x)=-2(x-6)^2+5$

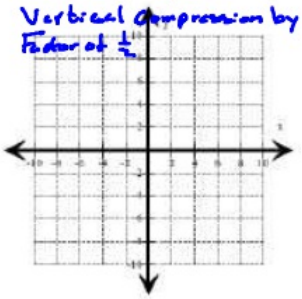
Right 6
Up 5
Reflect over x-axis
Vertical Stretch by factor of 2



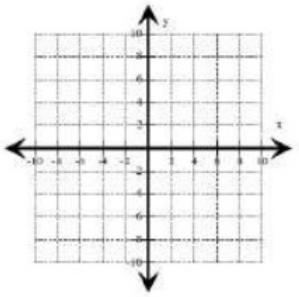
D: $(-\infty,\infty)$
R: $(-\infty,5]$

2. $f(x)=.5(x+1)^2+3$

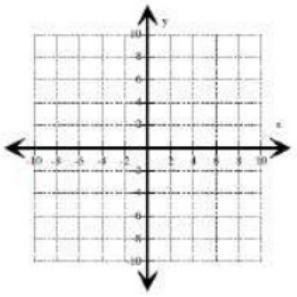
Left 1 up 3
Vertical compression by Factor of $\frac{1}{2}$



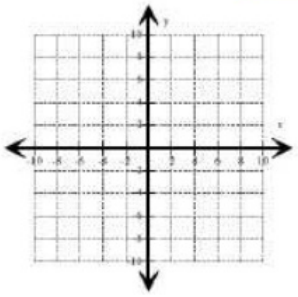
3. $f(x)=3(x-4)^2+1$



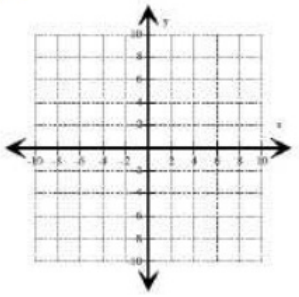
4. $f(x)=-3(x+3)^2+3$



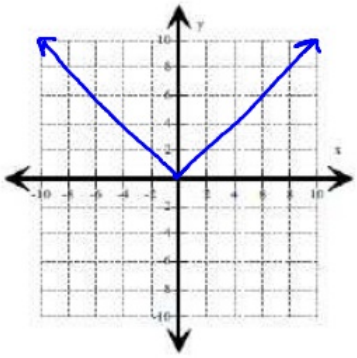
5. $f(x)=.25(x+2)^2-4$



6. $f(x)=-1.5(x+4)^2-4$



1. Draw the graph $f(x)=|x|$ 2. Give the functions Domain and Range

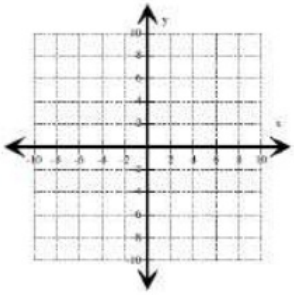


D: $(-\infty,\infty)$

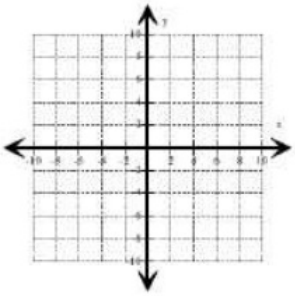
R: $[0,\infty)$

Graph each function below. Describe the translation of the parent function $f(x)=|x|$. Then give the functions Domain and Range

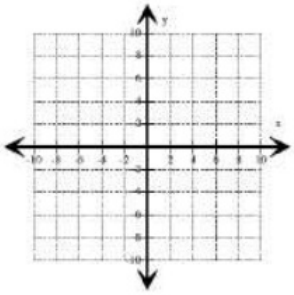
1. $f(x)=|x|+1$



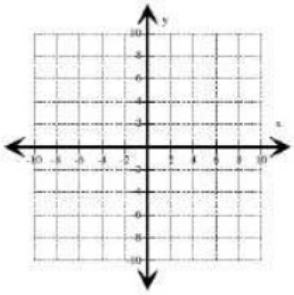
2. $f(x)=|x|-6$



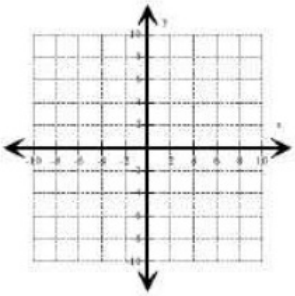
3. $f(x)=|x+2|$



4. $f(x)=|x-2|$



5. $f(x)=|x+5|$



6. $f(x)=|x|-3$