Algebra 1 **8.2 Notes**

Transformed Quadratic Function: $f(x) = a(x-h)^2 + k$

a:

-a:

x + h:

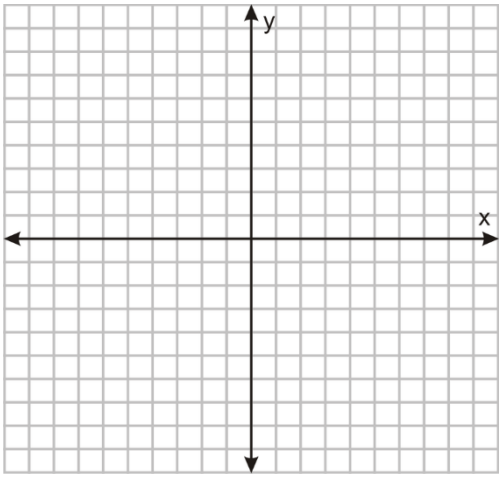
x – h:

+ k :

-k:

Sketch each parabola. Then state the vertex, axis of symmetry, domain and range.

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



Description:

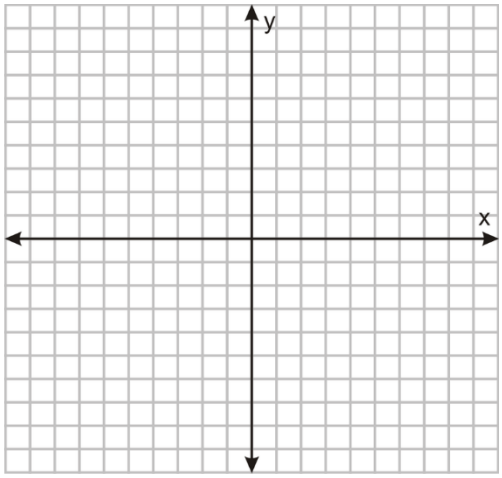
Vertex:

Axis of Symmetry:

Domain:

Range:

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



Description:

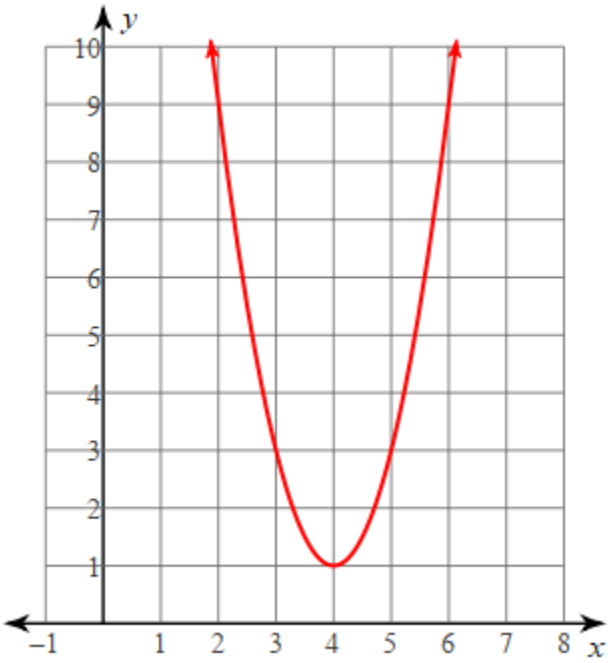
Vertex:

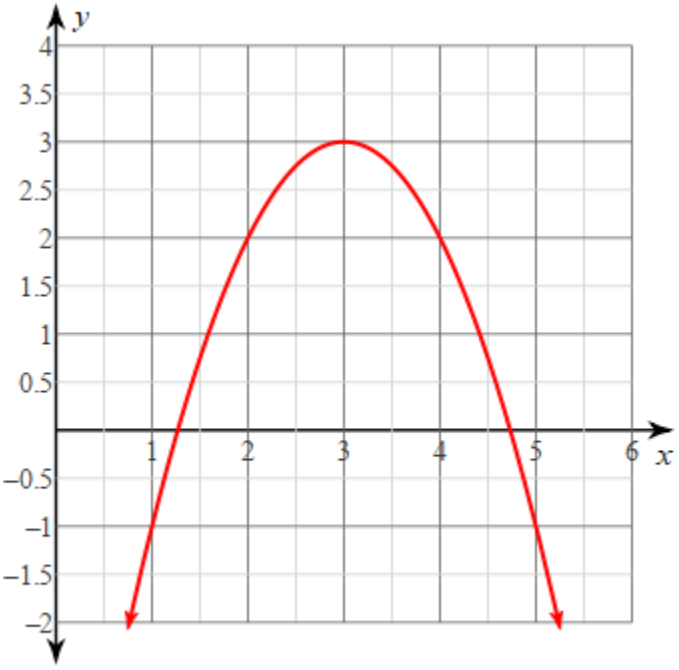
Axis of Symmetry:

Domain:

Range:

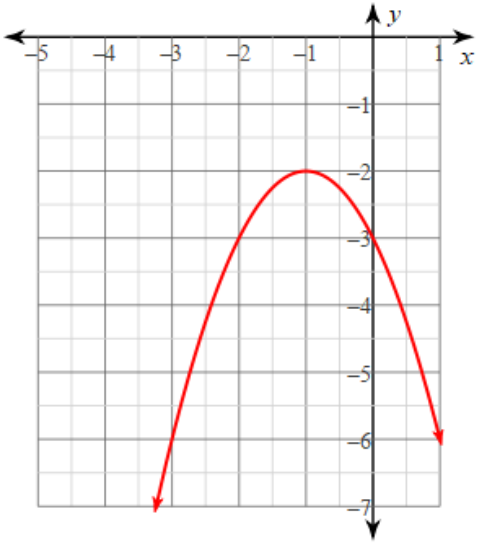
Write the equations of the parabolas.





You Try!

1) Pick the equation that matches the graph.



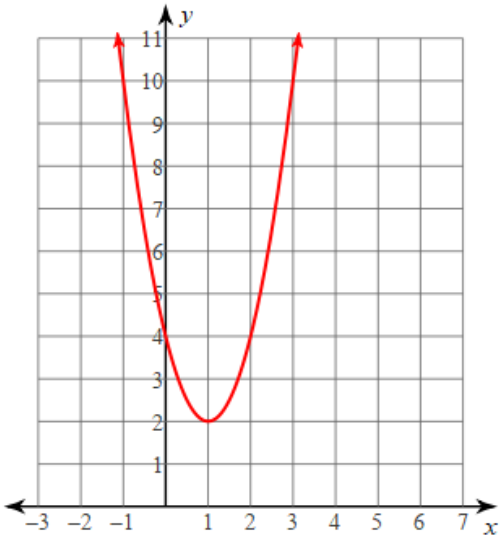
a) $f(x)=(x+1)^2-2$

b) $f(x)=-(x+1)^2-2$

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

d) $f(x)=-(x+1)^2+2$

2) Write an equation for the graph below.



3) Describe the transformations from the parent function that make this graph: $f(x)=-3(x-2)^2+4$