Name_____ Date_____ Period_____

GRAPHING QUADRATIC FUNCTIONS FACTORED FORM WORKSHEET #2

Directions: Answer the questions below and sketch the graph of each function.

1. $y = 2(x+3)(x-1)$

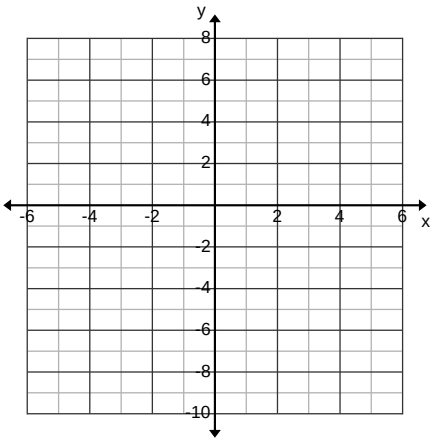
Opens Up or Down? Is the vertex a Max or Min?

x-intercepts:

Axis of symmetry is x = _____

Vertex: (_____, _____)

Domain: Range:



2. $y = -\frac{1}{2}(x-4)(x-8)$

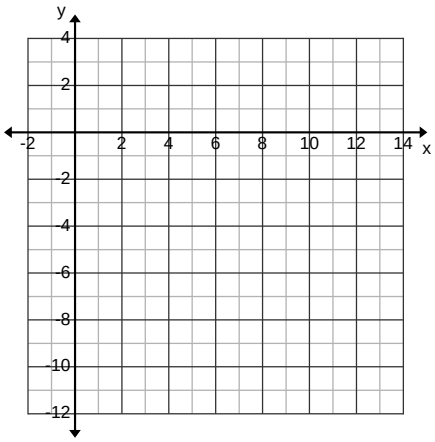
Opens Up or Down? Is the vertex a Max or Min?

x-intercepts:

Axis of symmetry is x = _____

Vertex: (_____, _____)

Domain: Range:



3. $y = 3x^2 + 12x$

Factor:

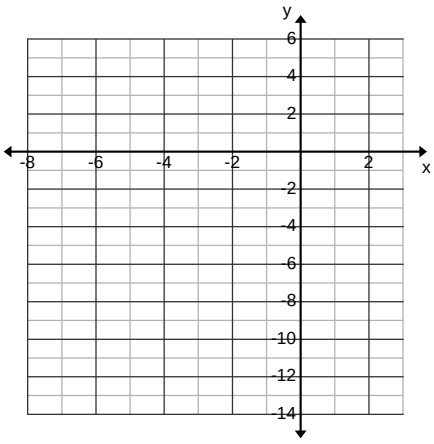
Opens Up or Down? Is the vertex a Max or Min?

y-intercept:

Axis of symmetry is x = _____

Vertex: (_____, _____)

Domain: Range:



4. $y = x^2 + 4x - 12$

Factor:

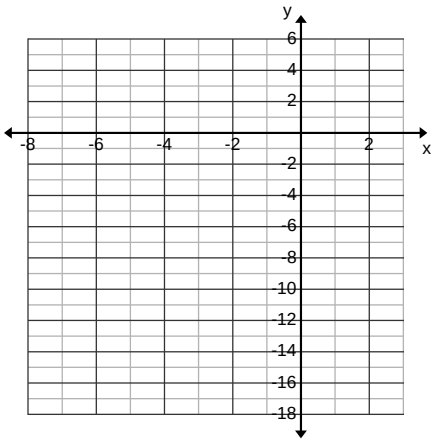
Opens Up or Down? Is the vertex a Max or Min?

y-intercept:

Axis of symmetry is x = _____

Vertex: (_____, _____)

Domain: Range:

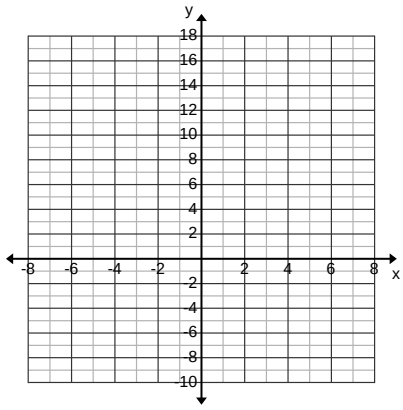


5. $y = -(x-4)(x+4)$

y-intercept:

Axis of symmetry is x = _____

Vertex: (_____, _____)

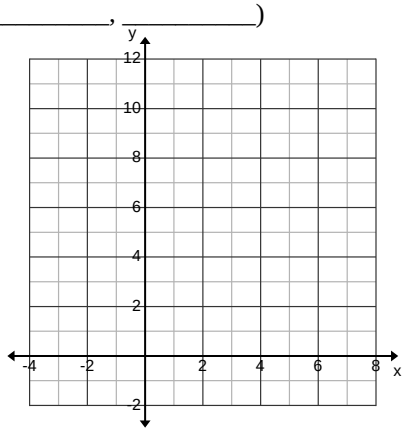


6. $y = (x-3)^2$

y-intercept:

Axis of symmetry is x = _____

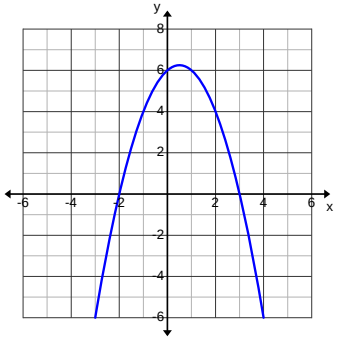
Vertex: (_____, _____)



Write the equations of the parabolas below in factored form.

a) Find the zeros (roots, x-intercepts).
b) Plug the zeros into the factored form.
c) Use the y-intercept to find the value of a in the factored form.
d) Find the axis of symmetry using the roots.
e) Find the vertex.

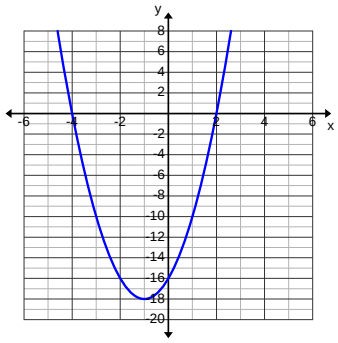
7.



$y =$ _____$(x -$ _____$)(x -$ _____$)$

axis of symmetry: vertex:

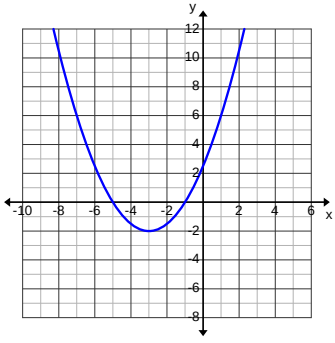
8.



$y =$ _____$(x -$ _____$)(x -$ _____$)$

axis of symmetry: vertex:

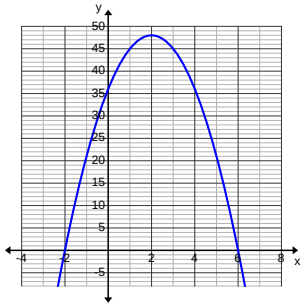
9.



$y =$ _____$(x -$ _____$)(x -$ _____$)$

axis of symmetry: vertex:

10.



$y =$ _____$(x -$ _____$)(x -$ _____$)$

axis of symmetry: vertex: