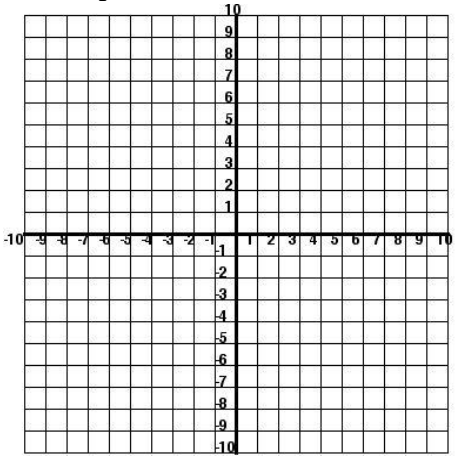
Algebra 2 Name: _____
Mr. Doherty

Quadratic functions Review

In each of the problems below you are given a quadratic function. Answer the questions that follow and graph the function. (Should be able to do without a calculator).

1) $y = x^2 - 10x + 24$

Graph the function below



Does the parabola open up or down?

What is the y-intercept of the parabola?

What is the x-intercept/factored form of the equation?

What are the x-intercepts?

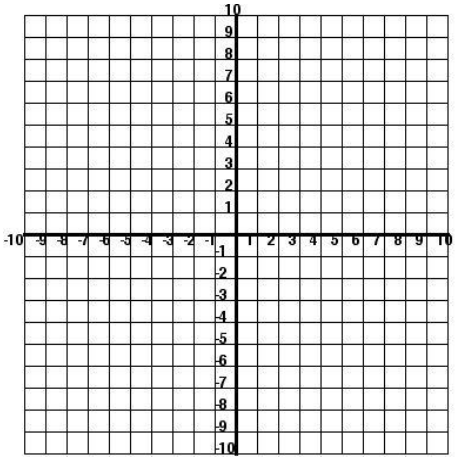
What is the axis of symmetry?

What is the vertex of the equation?

What are the zeros of the equation?

2) $y = -3(x-4)^2 + 3$

Graph the function below



Does the parabola open up or down?

What is the standard form of the quadratic?

What is the y-intercept of the parabola?

What is the vertex of the equation?

What is the axis of symmetry?

What is the x-intercept form of the equation?

What are the x-intercepts?

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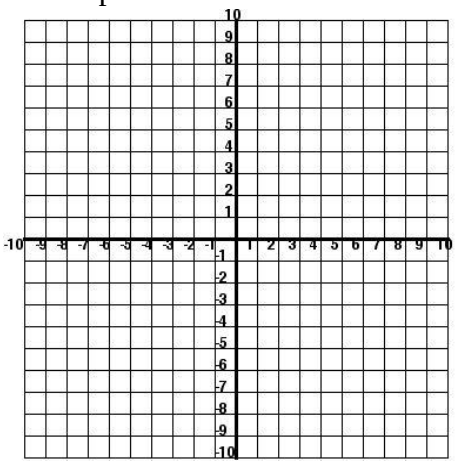
3) $y = 3x^2 - 3$

Graph the function below



Does the parabola open up or down?

What is the y-intercept of the parabola?

What is the axis of symmetry?

What is the x-intercept form of the equation?

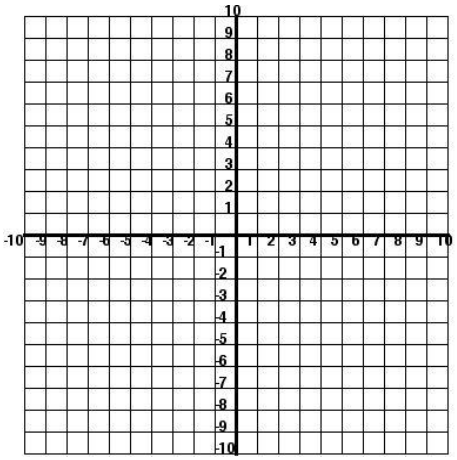
What are the zeros of the equation?

What are the x-intercepts?

What is the vertex?

4) $y = x^2 - 4x$

Graph the function below



Does the parabola open up or down?

What is the y-intercept of the parabola?

What is the x-intercept/factored form of the equation?

What is the axis of symmetry?

What is the vertex of the equation?

What are the x-intercepts?

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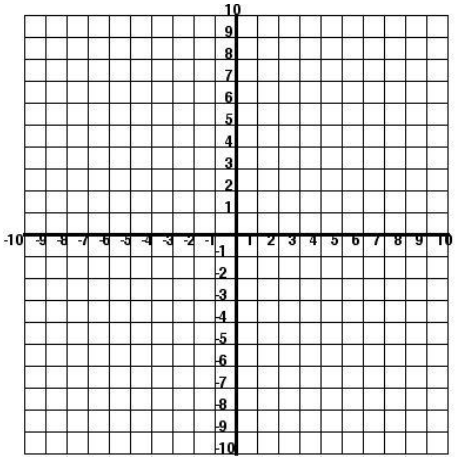
5) $y = \frac{1}{4}(x+4)(x-2)$ Does the parabola open up or down?

Graph the function below



What are the x-intercepts?

What is the standard form of the parabola?

What is the y-intercept of the quadratic?

What is the axis of symmetry?

What is the vertex of the equation?

6) Change the function from standard form into vertex form, and then state the vertex.

$y = -2x^2 - 20x - 47$

7) Find the lengths of each of the sides of the fence below, given that the area is 20 yards squared.

X

X+8

8) Find the zeros of the equation below.

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