

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class/Home worksheet: Alg2H  
Vertex form  
(book chapter 9, page 404 and onward)

Writing quadratic expression as a function:

Standard form:

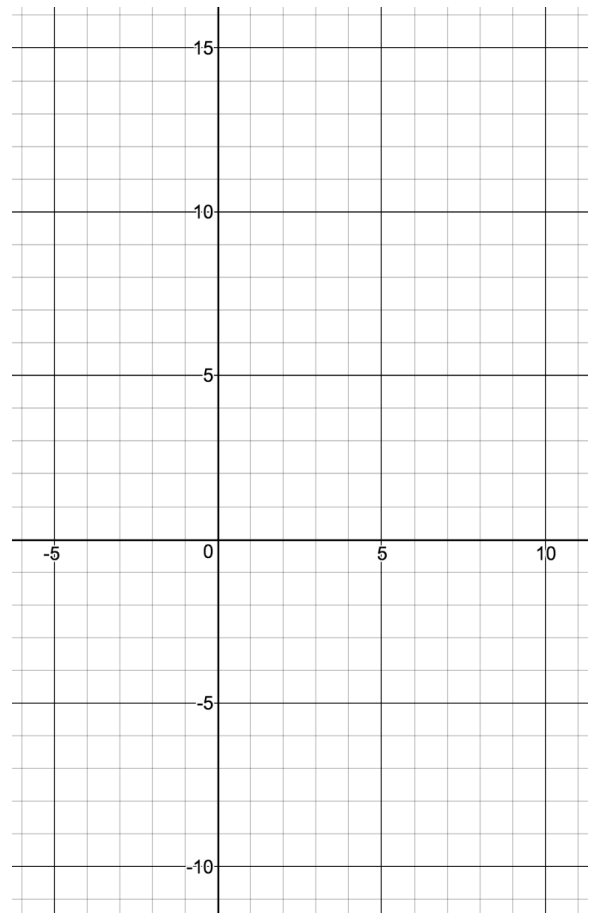
Useful for:

Factored form:

Useful for:

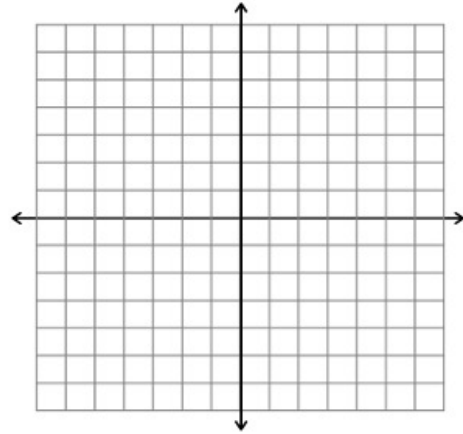
Vertex form:

Useful for:

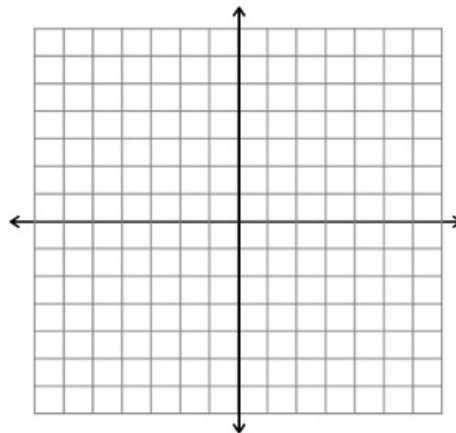


## Vertex form

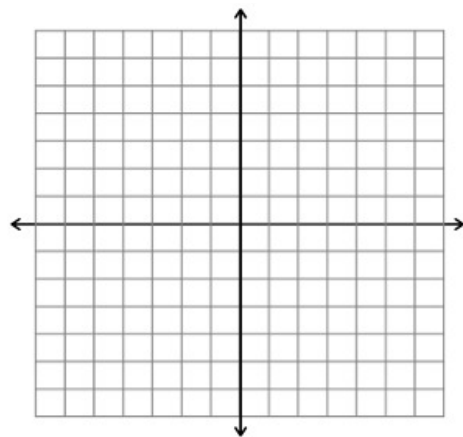
The rule of  $h$



The rule of  $k$



The rule of  $a$

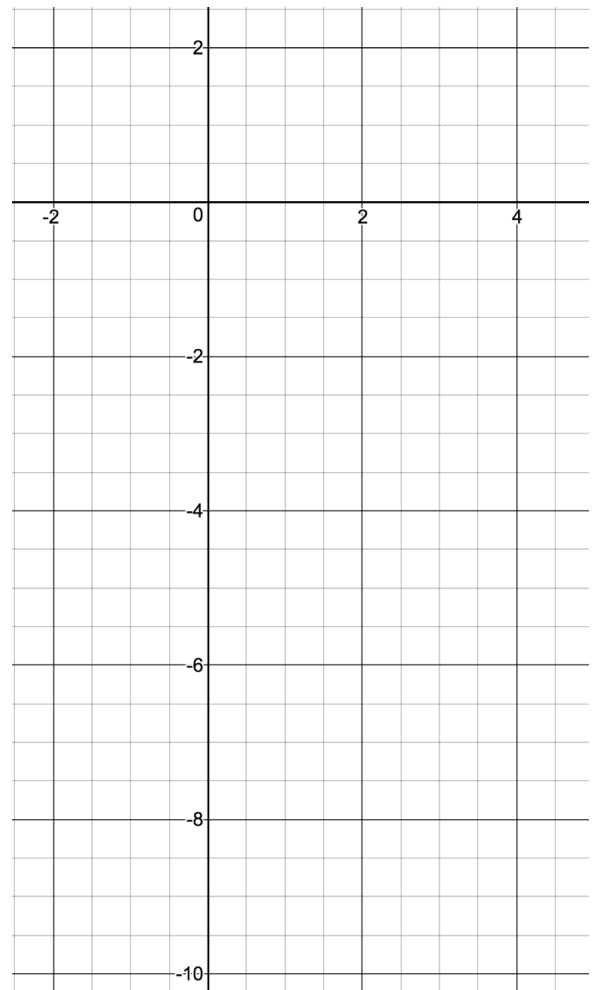


## Question:

Given the function

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

1. Write in standard form
2. Solve  $f(x) = 0$  for  $x$  (using the quadratic equation)
3. Write in Vertex form. What is the vertex?
4. What is the Y-intercept?
5. What is the X-intercept?
6. Write in factored form
7. Plot the function.



General process of moving from one form to another

Standard form:

Factored form

Vertex form



Using the following function:

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

Standard form:

Vertex form:

Y-intercept:

X-intercept:

Vertex:

Plot (free hand), and compare:

