

Quadratic Parameters

1. Name and show three forms of quadratic functions:

2. What does each of the following parameters control?
 - a. Describe it in words
 - b. Draw one or more parabolas and label significant points with these letters.
 - a
 - c
 - h
 - p
 - q
 - v

3. What is the discriminant, and what does it tell you about the graph of a parabola?

4. Express
 - a. c in terms of a , p , and q
 - b. p in terms of a , b , and the discriminant
 - c. q in terms of a , b , and the discriminant
 - d. $p+q$ in terms of a and b
 - e. h in terms of p and q
 - f. h in terms of a and b
 - g. pq in terms of a and c
 - h. v in terms of a , b , c
 - i. v in terms of the discriminant and a

5. How many x -intercepts if:
 - a. $v = 0$
 - b. $v > 0$ and $a > 0$
 - c. $v < 0$ and $a > 0$
 - d. $v > 0$ and $a < 0$
 - e. $v < 0$ and $a < 0$
 - f. $a > 0$ and $c < 0$
 - g. $a < 0$ and $c > 0$