1. The graph of f(x)= a(x-h)² + k ,where a ≠ 0, is a ------------- of ---------- form,

With (-----,----) as a vertex.

1. If a >0, then the graph of the parabola is vertically ---------.
2. If ------< a < ---- , then the graph of the parabola is vertically ------------
3. If a <0 then the graph does a -------------- across the x-axis.

1. The axis of symmetry of a parabola in vertex form is the line x = ---------
2. The ---------- of a parabola is the point (h, k).
3. write the standard form y = 2x² - 4x + 5 in vertex form:

y - ------ = 2x² - 4x keep x² and x-terms in one side.

y- ---- = (----) (x² - (---)(x) ) factor out the leading coefficient since

we want 1 as leading coefficient.

y-5+ 2(---) = 2(x² - 2x+-----) put the coefficient of x term in half and

square it inside the parenthesis. The same product

should also appear in left hand side.

y - ------- = 2(x- ------)² find the perfect square and simplify.

y= 2(x- ------)² + ------ Write in vertex form

Answers

1. The graph of f(x)= a(x-h)² + k ,where a ≠ 0, is a --parabola--- of ---vertex—form

With (h,k) as a vertex.

2. If a >0, then the graph of the parabola is vertically --stretched-------.

3. If ------< a < ---- , then the graph of the parabola is vertically ---compressed------

4. If a <0 then the graph does a --reflection--- across the x-axis.

5. The axis of symmetry of a parabola in vertex form is the line x = h-------

6. The -vertex--------- of a parabola is the point (h, k).

7. Write the standard form y = 2x² - 4x + 5 in vertex form:

y - 5--- = 2x² - 4x keep x² and x-terms in one side.

y- 5--- = ( 2 --) (x² - (2--)(x) ) factor out the leading coefficient since

we want 1 as leading coefficient.

y-5+ 2(1--) = 2(x² - 2x+ 1²---) put the coefficient of x term in half and

square it inside the parenthesis. The same product

should also appear in left hand side.

y - 3----- = 2(x- 1----)² find the perfect square and simplify.

y= 2(x- 1----)² + 3---- Write in vertex form