LANGUAGE of Quadratic Functions

Fill in the blanks:

1. To complete the square of $x^2 - 6x$, you add the number _____.
2. To graph $y = (x - 4)^2$, shift the graph of $y = x^2$ _____ units, in the direction _____.
3. The graph of a quadratic function is called a _____.
4. The vertical line passing through the vertex is called the _____.
5. The graph of $y = 2x^2 - 6x - 4$ opens _____.
6. The form of the quadratic function useful for graphing is $f(x) =$ _____
7. Do all quadratic functions have extreme values? _____
8. The expression for the discriminant is _____
9. If the zeros of a quadratic function are -5 and 9, what is the axis of symmetry? _____
10. Equations of the form $ax^2 + bx + c = 0$ are called _____ equations.
11. Equations of the form $(x - h)^2 = k$ can be solved by taking the _____ of both sides.
12. The equation $x^2 + 5 = 0$ has no _____ solutions.
13. This method always works for solving a quadratic equation: _____

    The main use of this method is to solve equations that cannot be _____.
14. If the discriminant is positive and a perfect square, then there are 2 _____ real roots.
15. You can tell an equation is quadratic, not linear, by _____.
16. To find the x intercepts, set $y =$ _____
17. If the leading coefficient is negative, the parabola opens _____.
18. The point at which a parabola intersects its axis of symmetry is called the _____
19. For $y = x^2$, describe the interval over which the graph is increasing. _____