**Quadratic Functions Vocabulary**

**Quadratic Function** is a polynomial function with the highest degree of 2 for the variable $x$. It can be written in the form $y = ax^2 + bx + c$.

**Parabola** is the graph of a quadratic function.

**x-intercepts** are the $x$-values where the parabola intersects the $x$-axis.

**y-intercept** is the $y$-value where the parabola intersects the $y$-axis.

**Vertex** of a parabola is the highest or the lowest point on the graph.

**Axis of Symmetry** is the vertical line that passes through the vertex and divides the parabola into two mirror images.

**Standard form** of a quadratic function: $y = ax^2 + bx + c$

**Intercept form** of a quadratic function is $y = a(x - p)(x - q)$; where $p$ and $q$ are the $x$-intercepts.

**Vertex form** of a quadratic function is $y = a(x - h) + k$; where $(h, k)$ is the vertex of the parabola.

![Graph of a quadratic function]

- **x-intercepts**: ________________
- **y-intercept**: ________________
- **Vertex**: ________________
- **Axis of Symmetry**: ________________
- **Standard form**: ________________
- **Intercept form**: ________________
- **Vertex form**: ________________
Real life Parabolas – put a check mark next to each picture that represents a parabola:

You will have a project where you will have to show pictures of parabolas and find their equations.

Start looking for them! ☺️