

# 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.

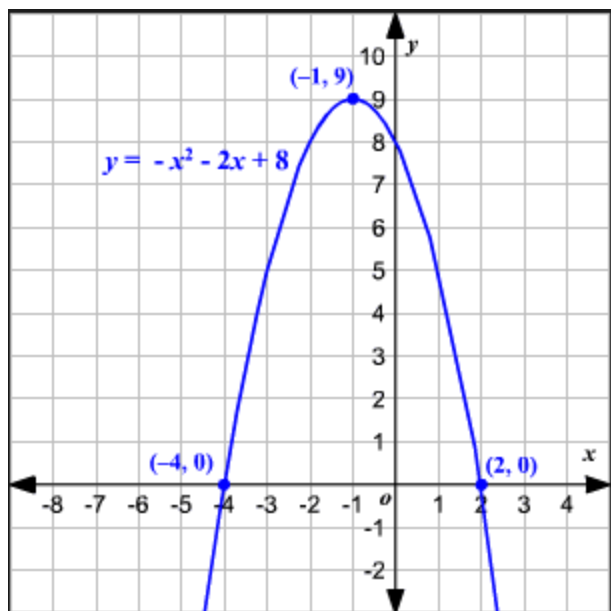
**Vertex** of a parabola is the highest or the lowest point on the graph.

**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.



x-intercepts: \_\_\_\_\_

y-intercept: \_\_\_\_\_

Vertex: \_\_\_\_\_

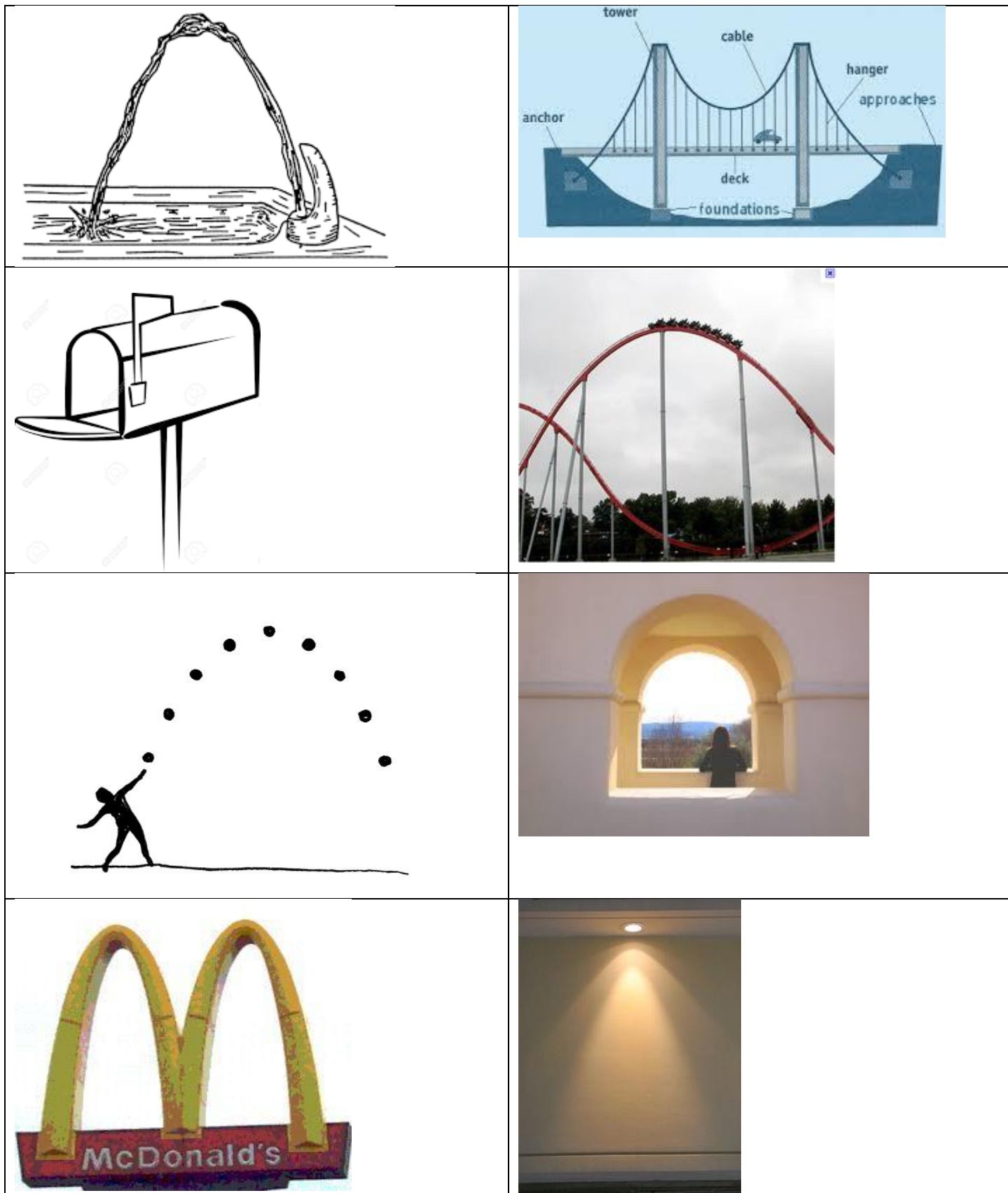
Axis of Symmetry: \_\_\_\_\_

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! ☺