<u>The Parabola</u>

- **Equations of the parabola**
  - With focus $(0, a)$ and directrix $y = -a$ is: $x^2 = 4ay$
  - With vertex (h, k) and axis parallel to the y-axis is: $(x - h)^2 = 4a(y - k)$

- **General equations with axis parallel to:**
  - y-axis is $y = Ax^2 + Bx + C$
  - x-axis is $x = Ay^2 + Bx + C$