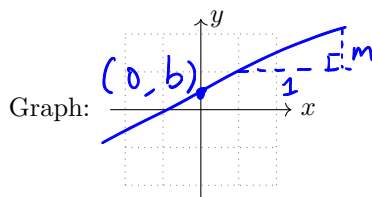


MATH 2D Prep: Linear and Quadratic Curves

Facts to Know:

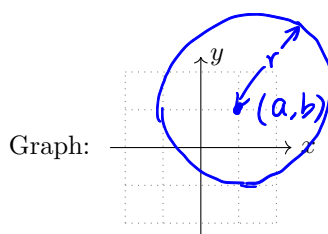
1. Straight line:

Equation: $y = mx + b$



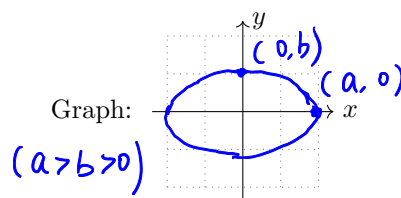
2. Circle:

Equation: $(x-a)^2 + (y-b)^2 = r^2$



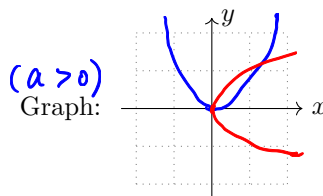
3. Ellipse:

Equation: $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$



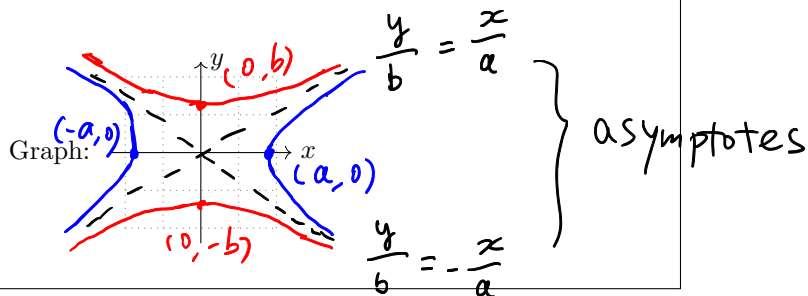
4. Parabola:

Equation: $y = ax^2$
 $x = ay^2$



5. Hyperbola:

Equation: $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$
 $\frac{y^2}{b^2} - \frac{x^2}{a^2} = 1$



(linear)

Quadratic

Examples:

1. Sketch the intersections of the line $y = x + 1$ and the hyperbola $x^2 - 4y^2 = 1$

