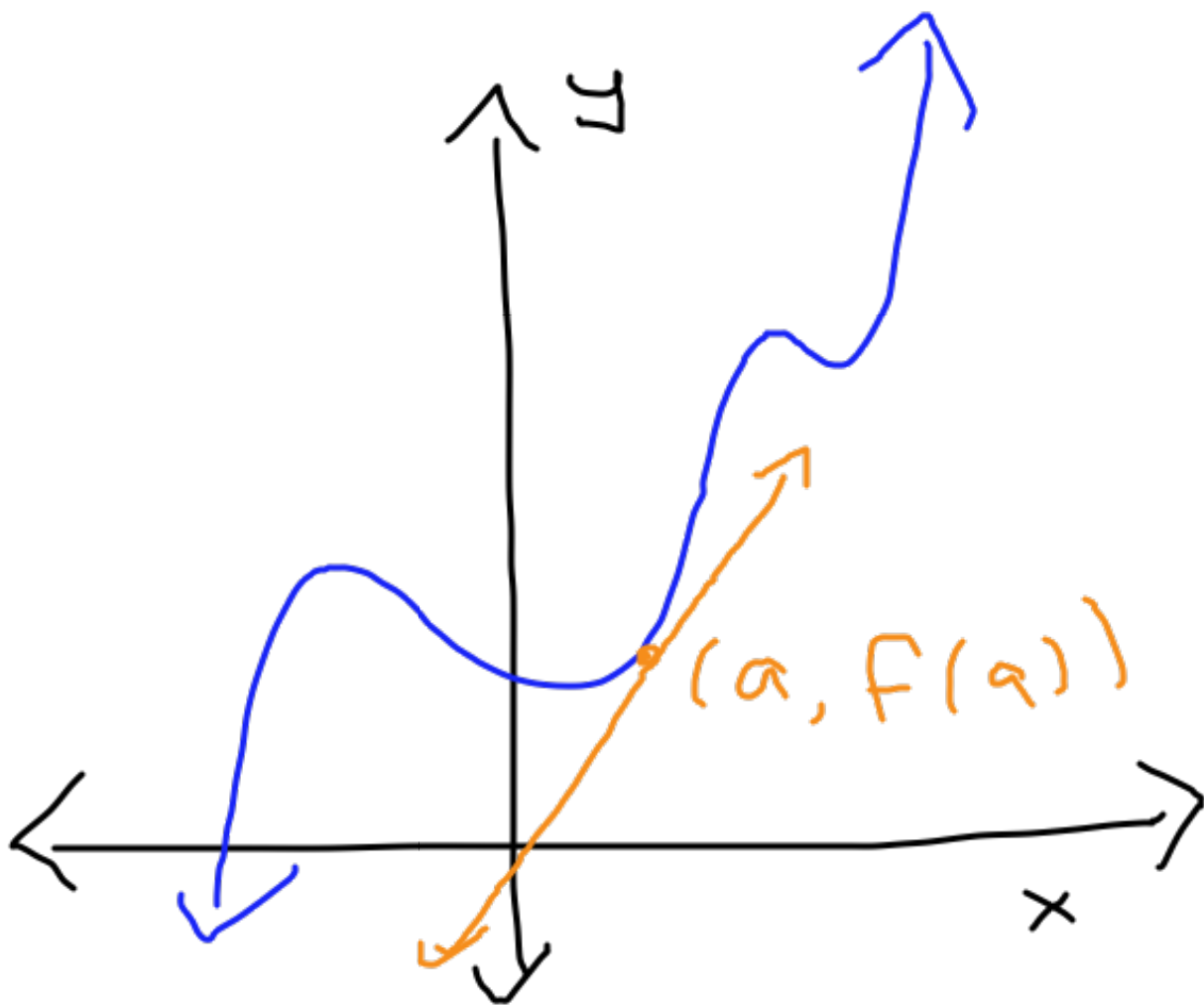


Goals for the class:

1) Find the tangent line at any point on a (smooth) curve.

f is a real-valued function of a real variable. Means f takes input from the real numbers and spits out real numbers.

Graph of f

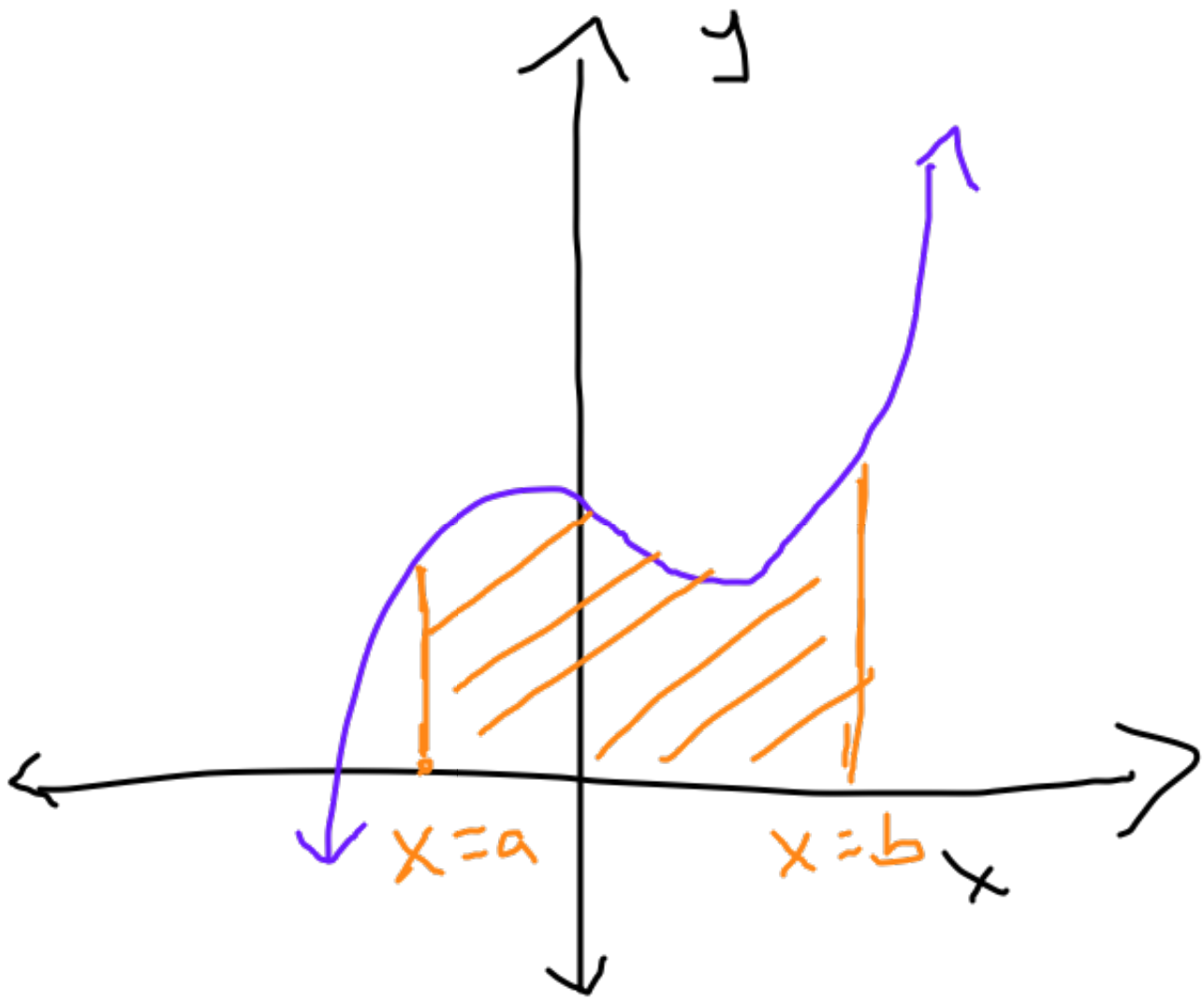


Orange = tangent line

We will calculate the slope of the line.

2) Calculate the area under a (not necessarily smooth) curve

For a function, look at the area between the graph and the x -axis.



We'll calculate a formula
for the area if f is
continuous.

3) The equations of kinematics (Newtonian motion)

$$x = x_0 + v_0 t + \frac{1}{2} a t^2$$

$$v = v_0 + a t$$

x = position

v = velocity

a = acceleration

Goal: relate these
equations

4) Explore natural questions

Why could eradicate polio but not measles?