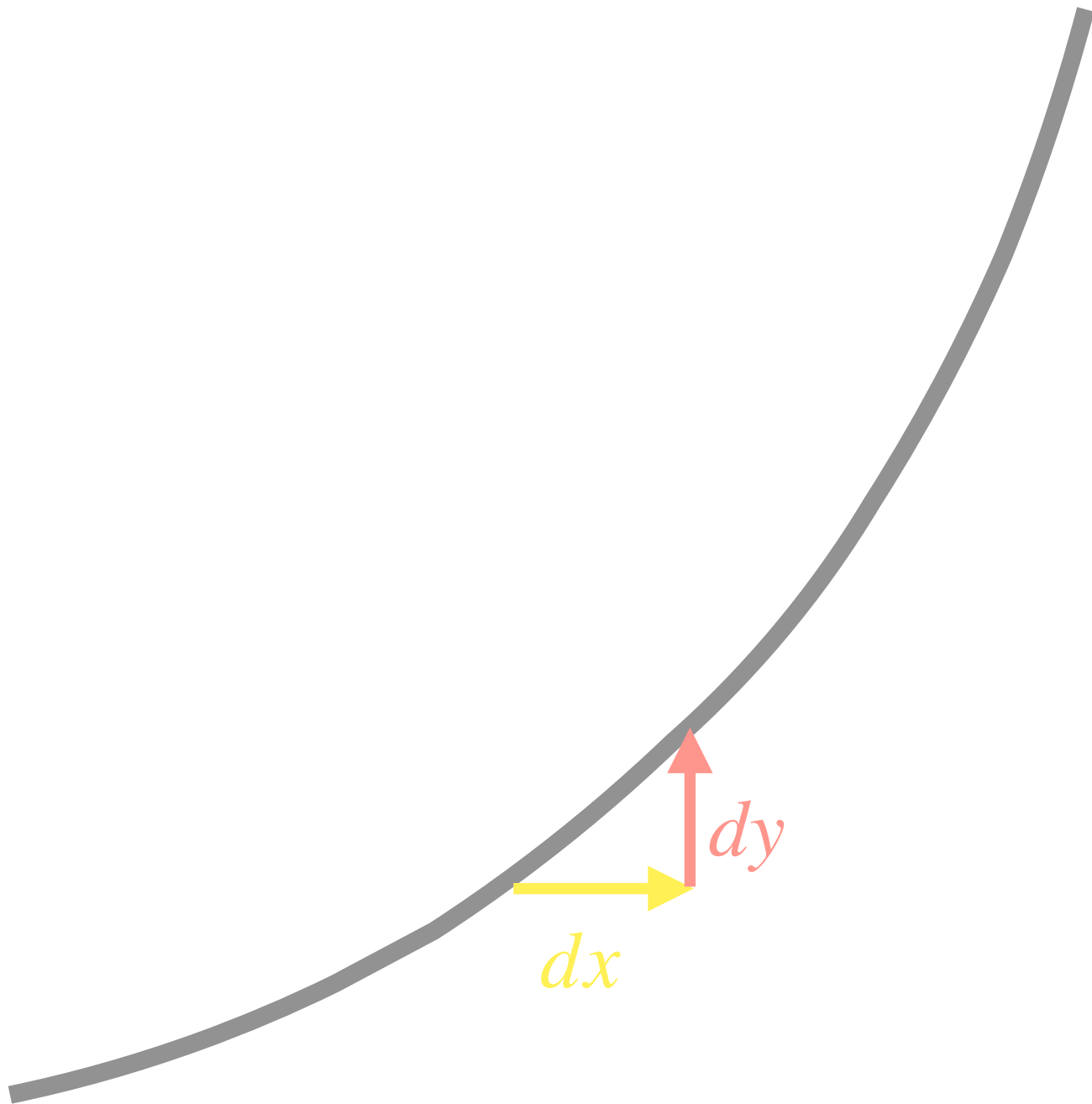


derivatives recap

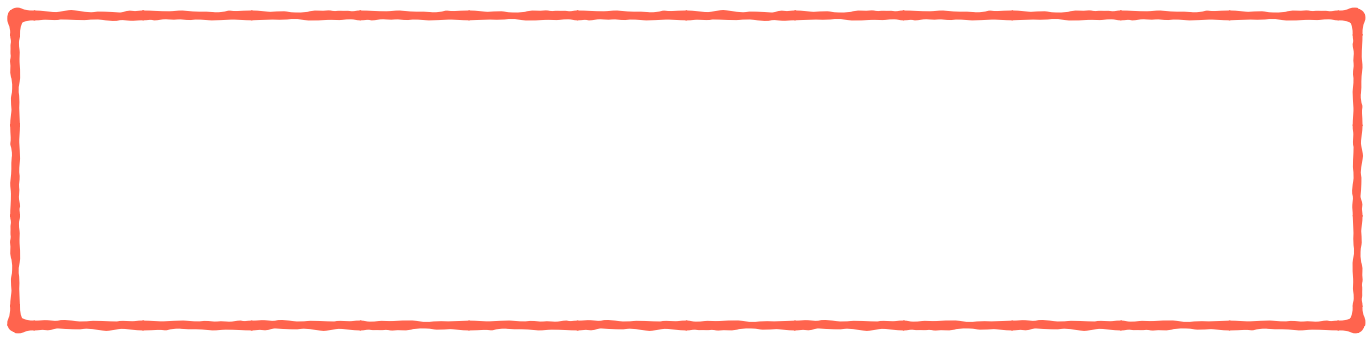


dx



dy

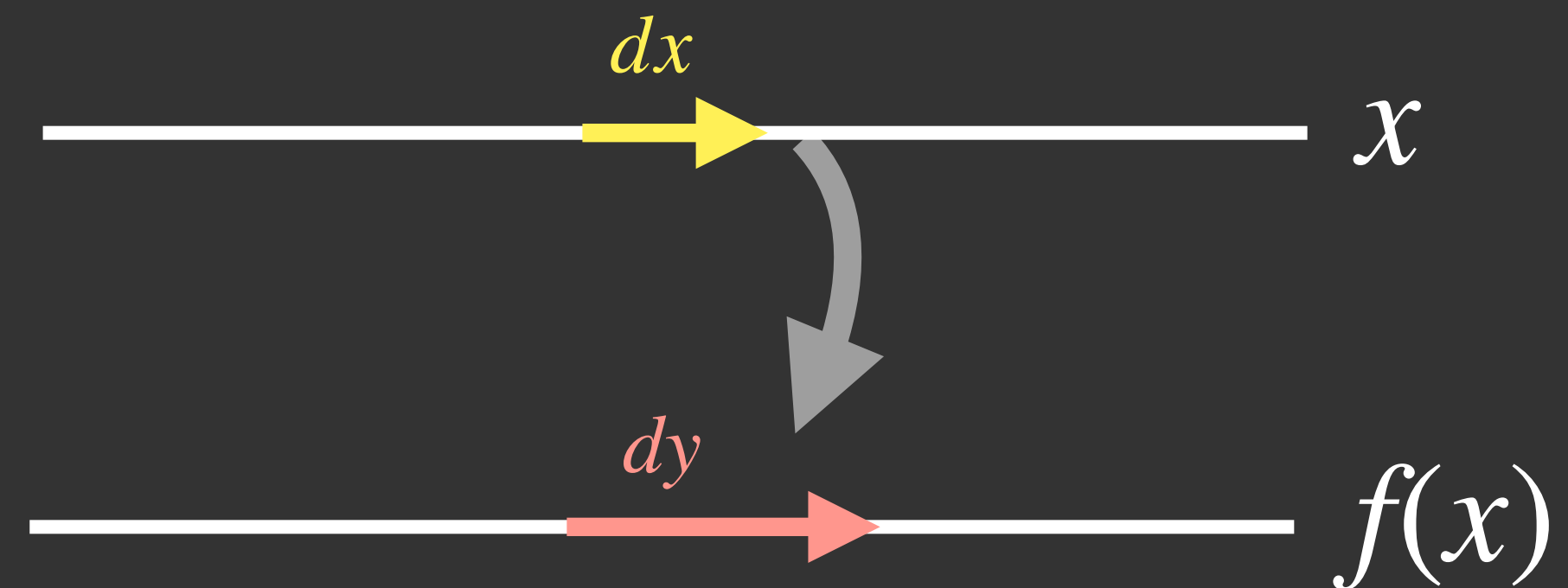
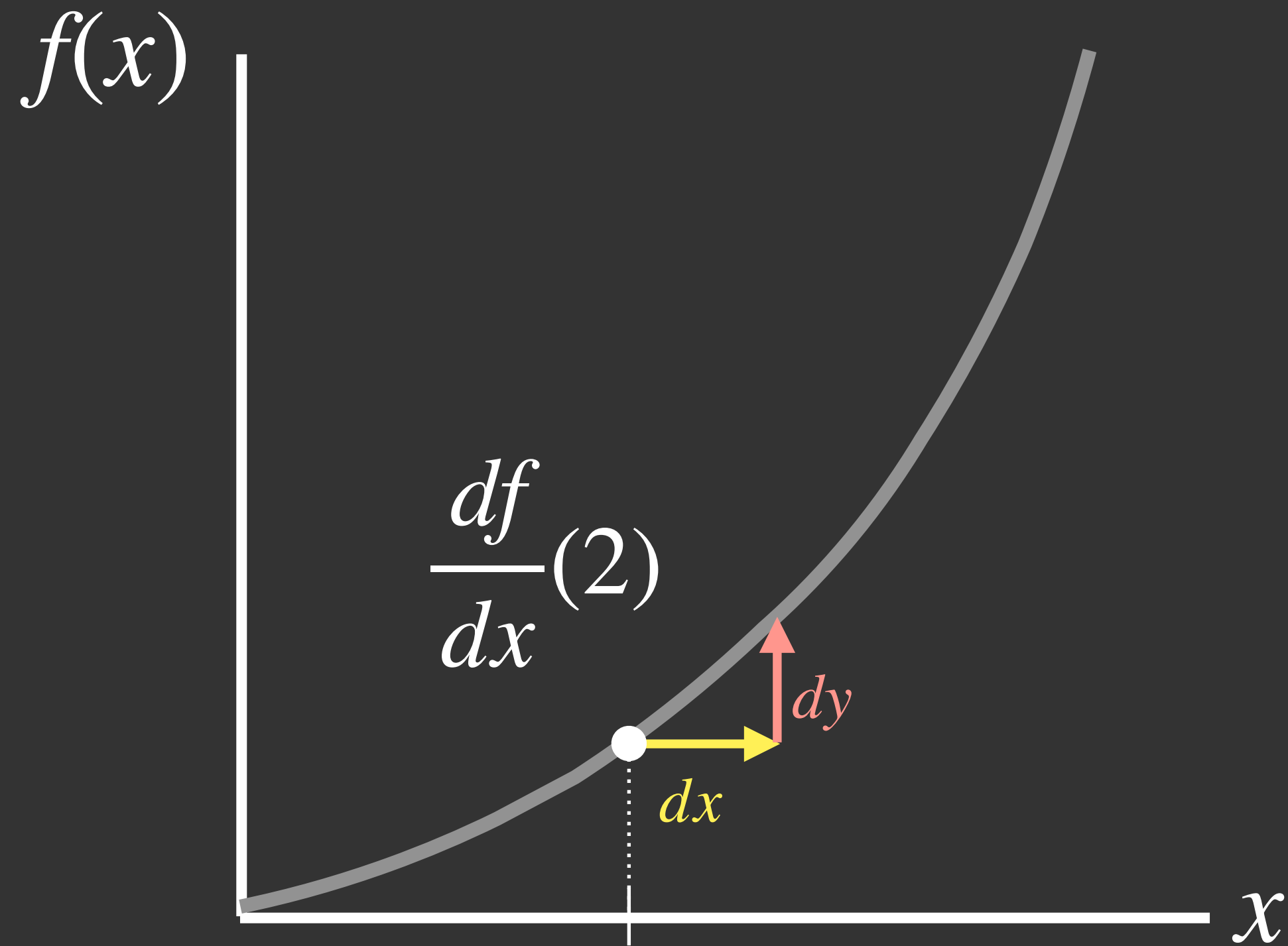




derivatives recap

Before: assume $f(x)$ with derivative $\frac{df}{dx}$. What does this mean?

$$\frac{df}{dx} = \lim_{h \rightarrow 0} \frac{f(a+h) - f(a)}{h}$$



partial derivatives

Now: assume $f(x, y)$ with $\frac{\partial f}{\partial x}$ and $\frac{\partial f}{\partial y}$

$$\frac{\partial f}{\partial x} = \lim_{h \rightarrow 0} \frac{f(a + h, b) - f(a, b)}{h}$$

$$\frac{\partial f}{\partial y} = \lim_{h \rightarrow 0} \frac{f(a, b + h) - f(a, b)}{h}$$

•
• for $f(x, y, z, \dots)$
•