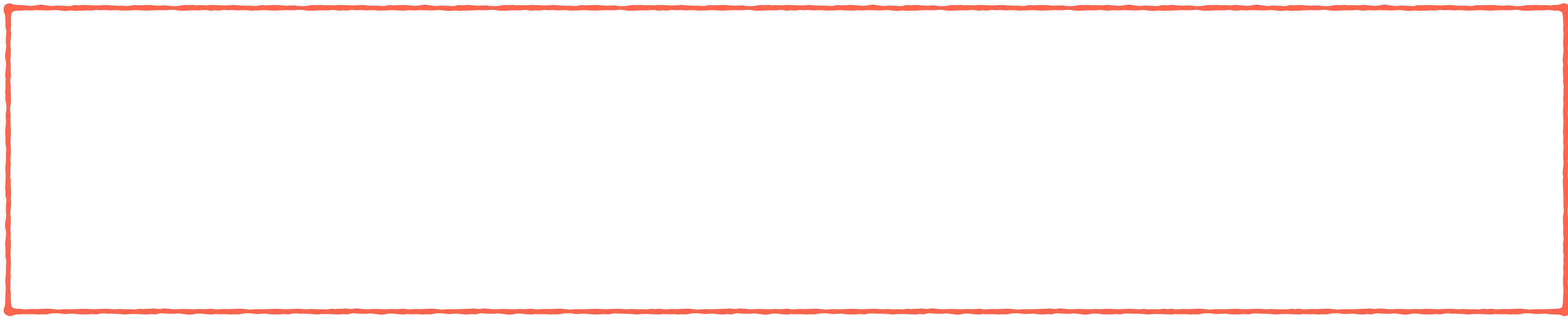


the chain rule



the chain rule

Let's now consider differentiating "compositions" of functions:

$$f \circ g(x) = f(g(x)) \quad \text{"do } g \text{ then } f"$$

or

$$f \circ g \circ h(x) = f(g(h(x))) \quad \text{"do } h \text{ then } g \text{ then } f"$$

If f and g are differentiable, then

$$\frac{d}{dx} (f(g(x))) = f'(g(x)) \cdot g'(x)$$

the chain rule