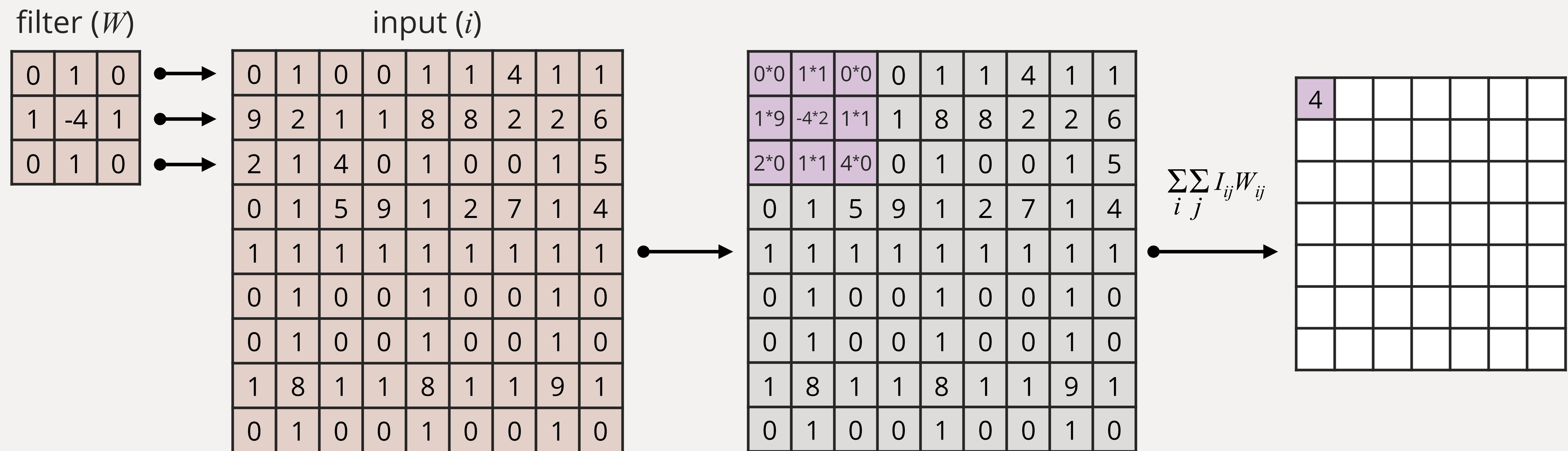


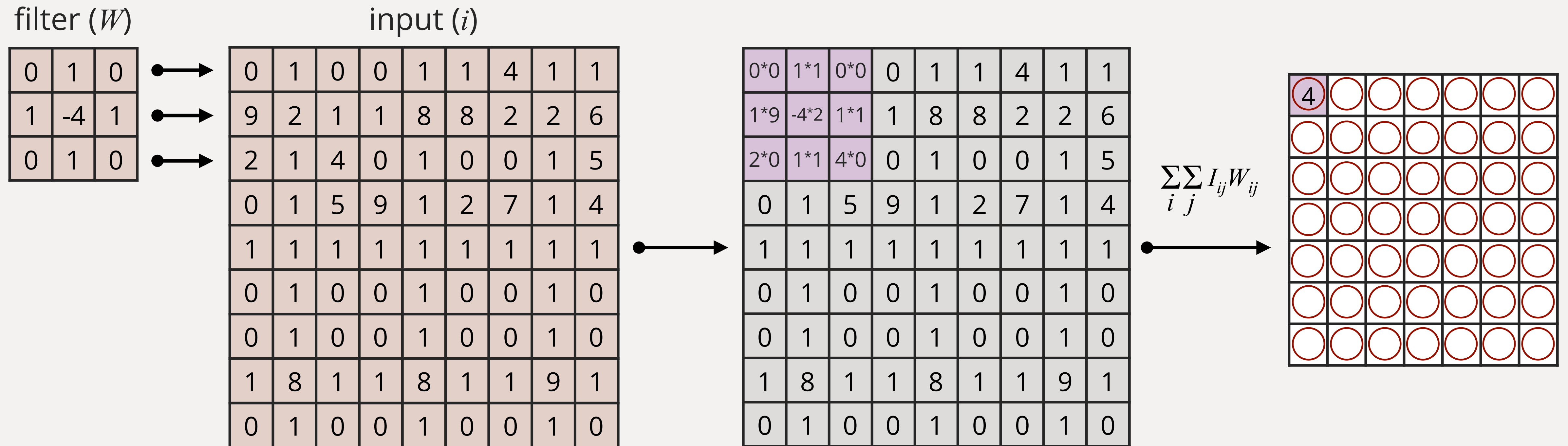
An abstract network diagram with numerous nodes (dots) and connecting lines, some solid and some dashed, creating a complex web-like structure. The nodes are concentrated on the left side, with lines extending towards the right.

# Activation Functions

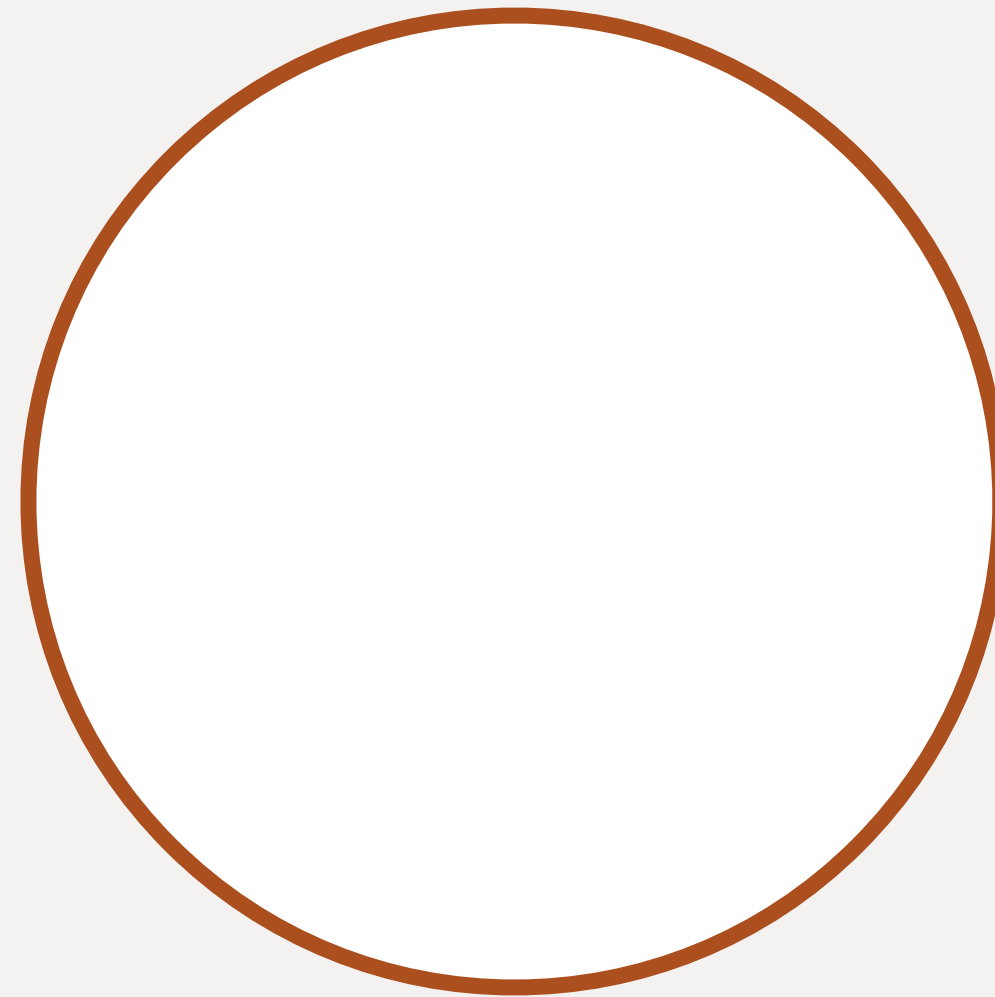
# Activation Functions



# Activation Functions



# Activation Functions



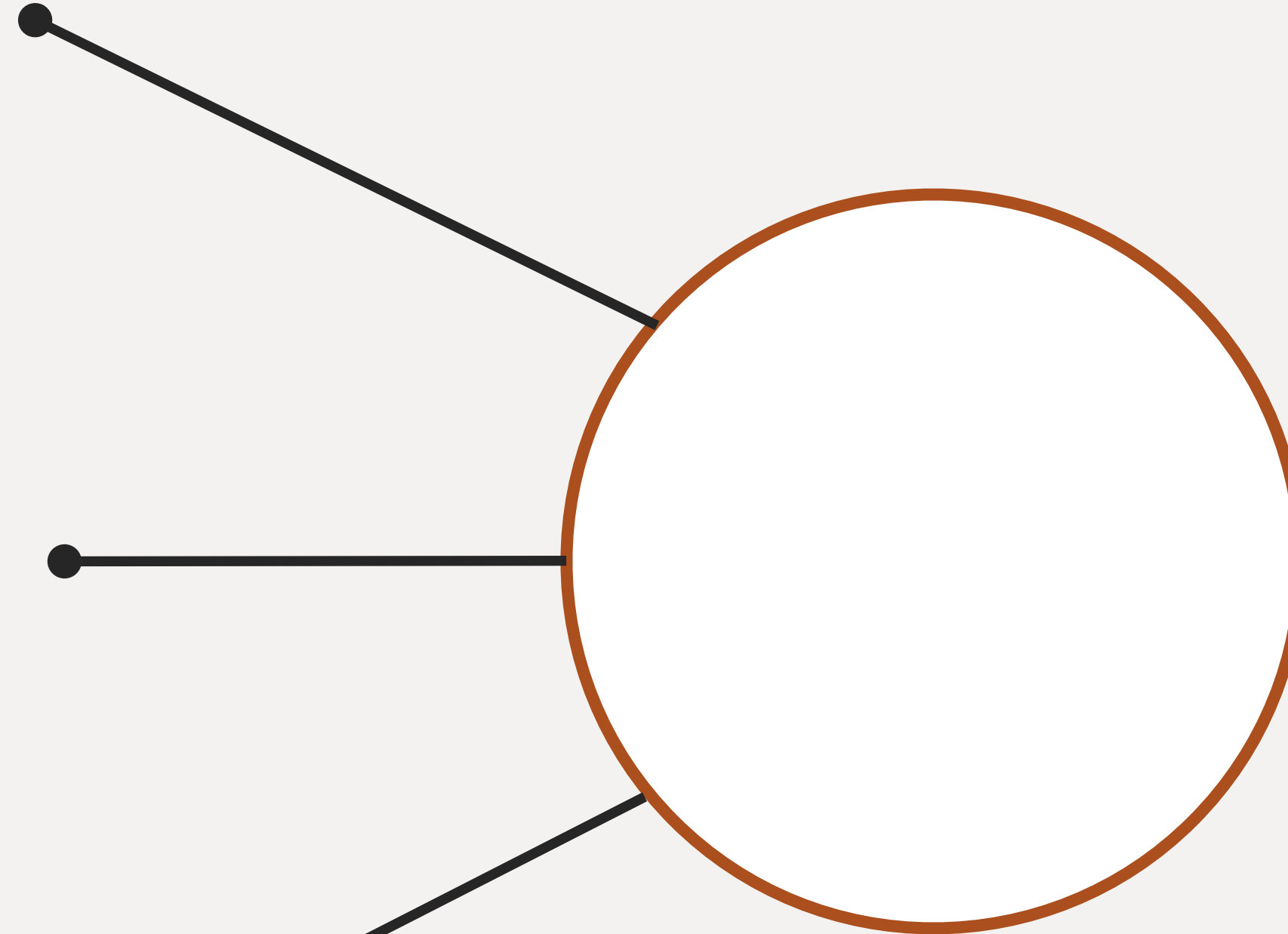
# Activation Functions

input

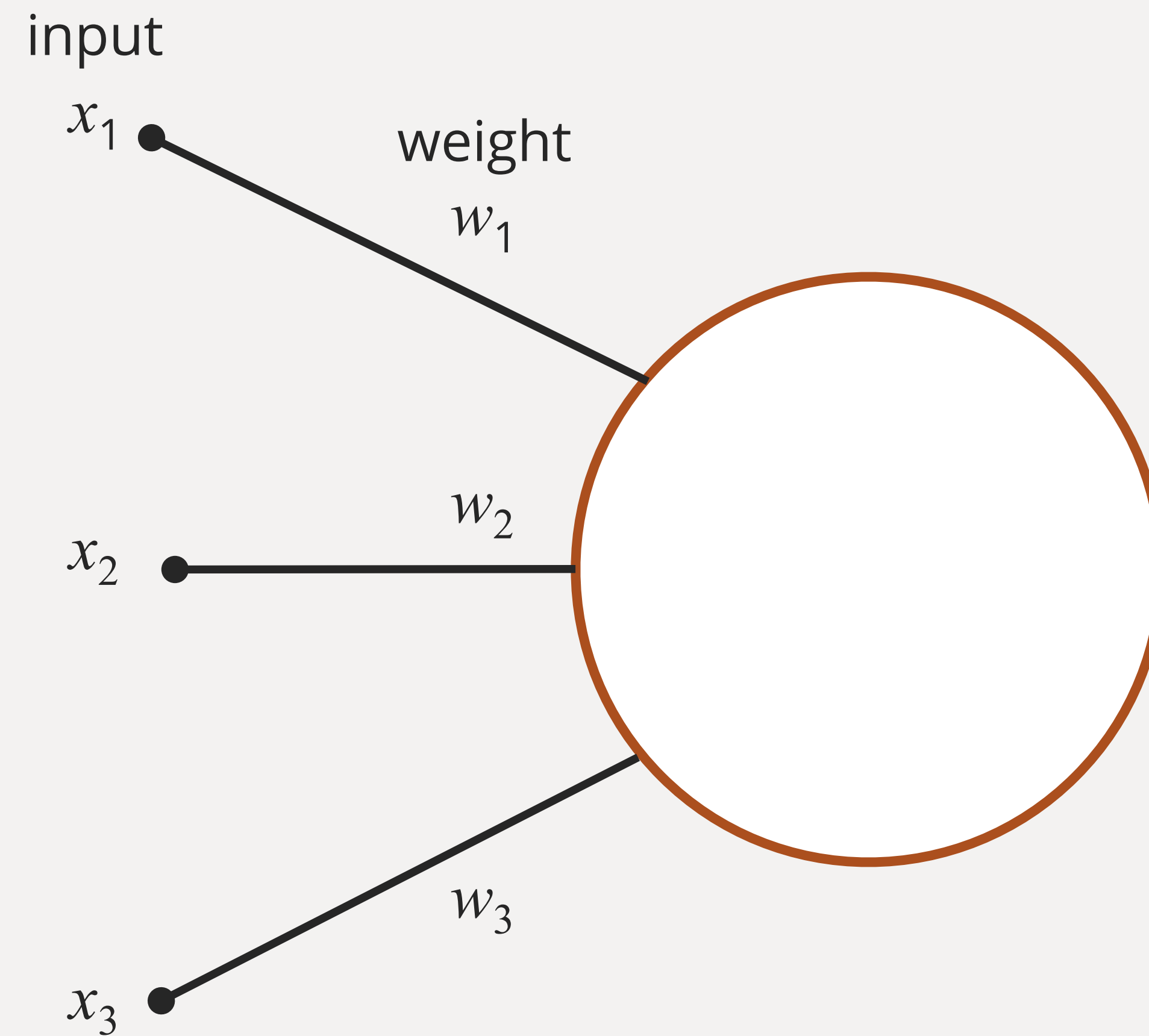
$x_1$

$x_2$

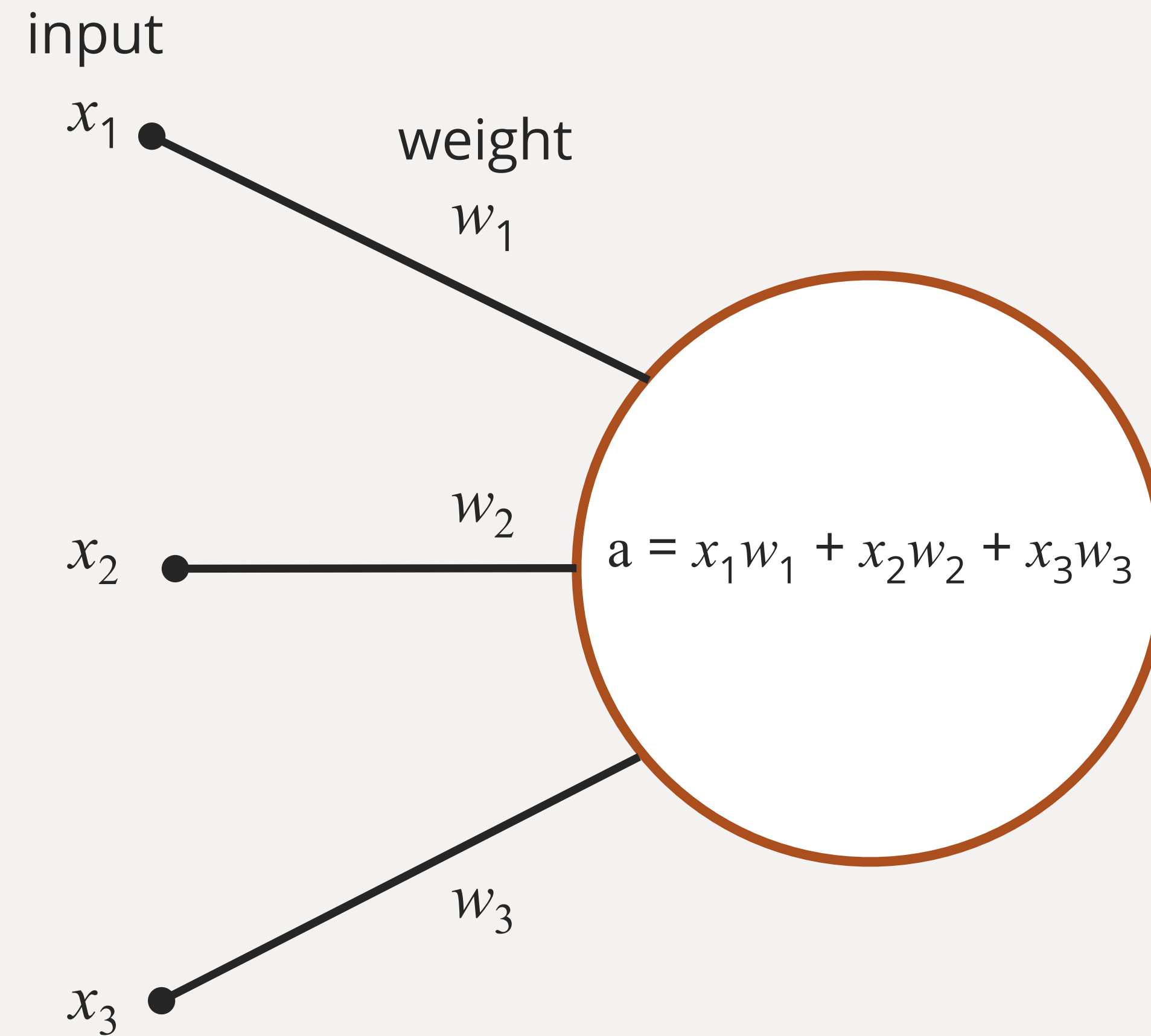
$x_3$



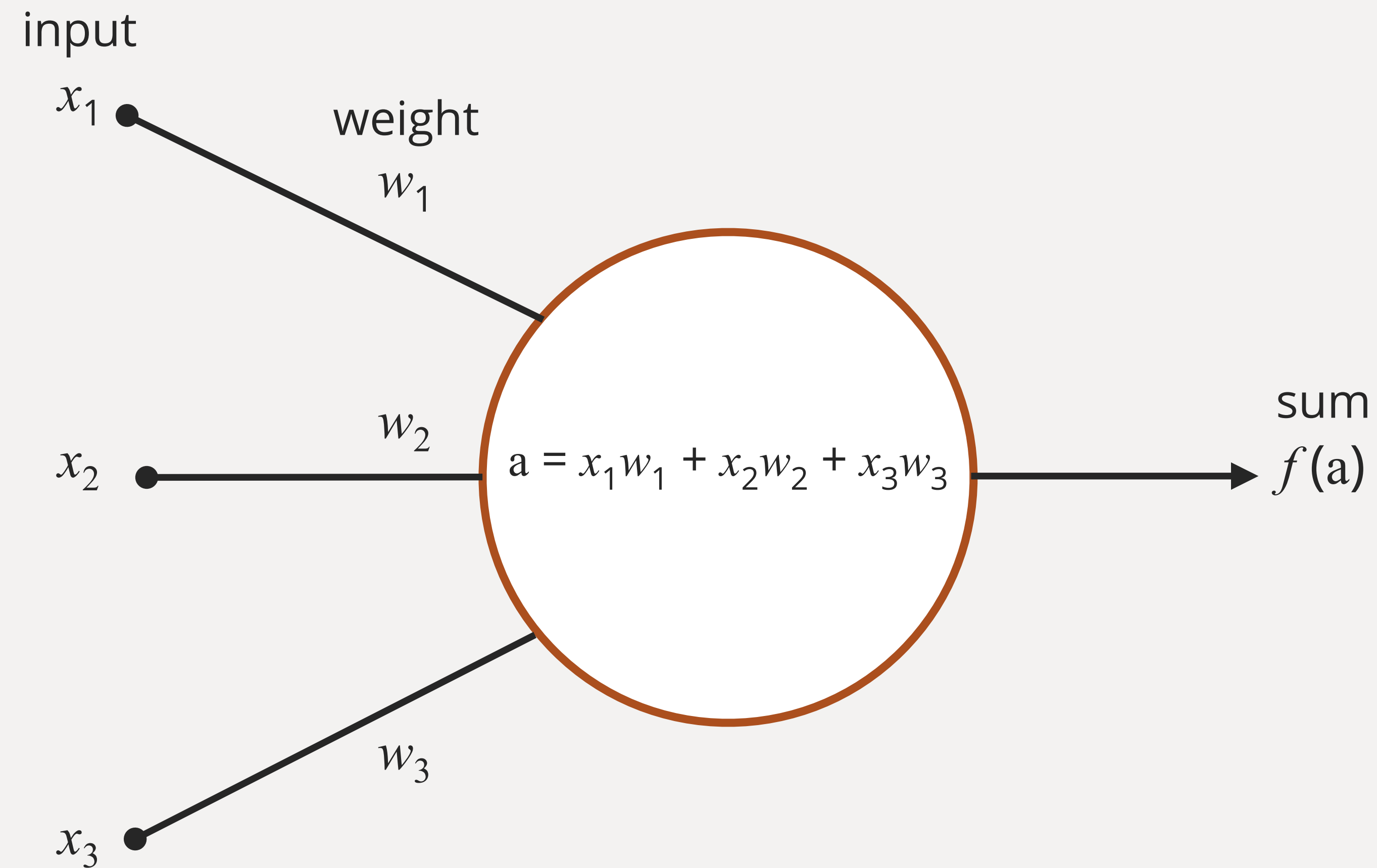
# Activation Functions



# Activation Functions

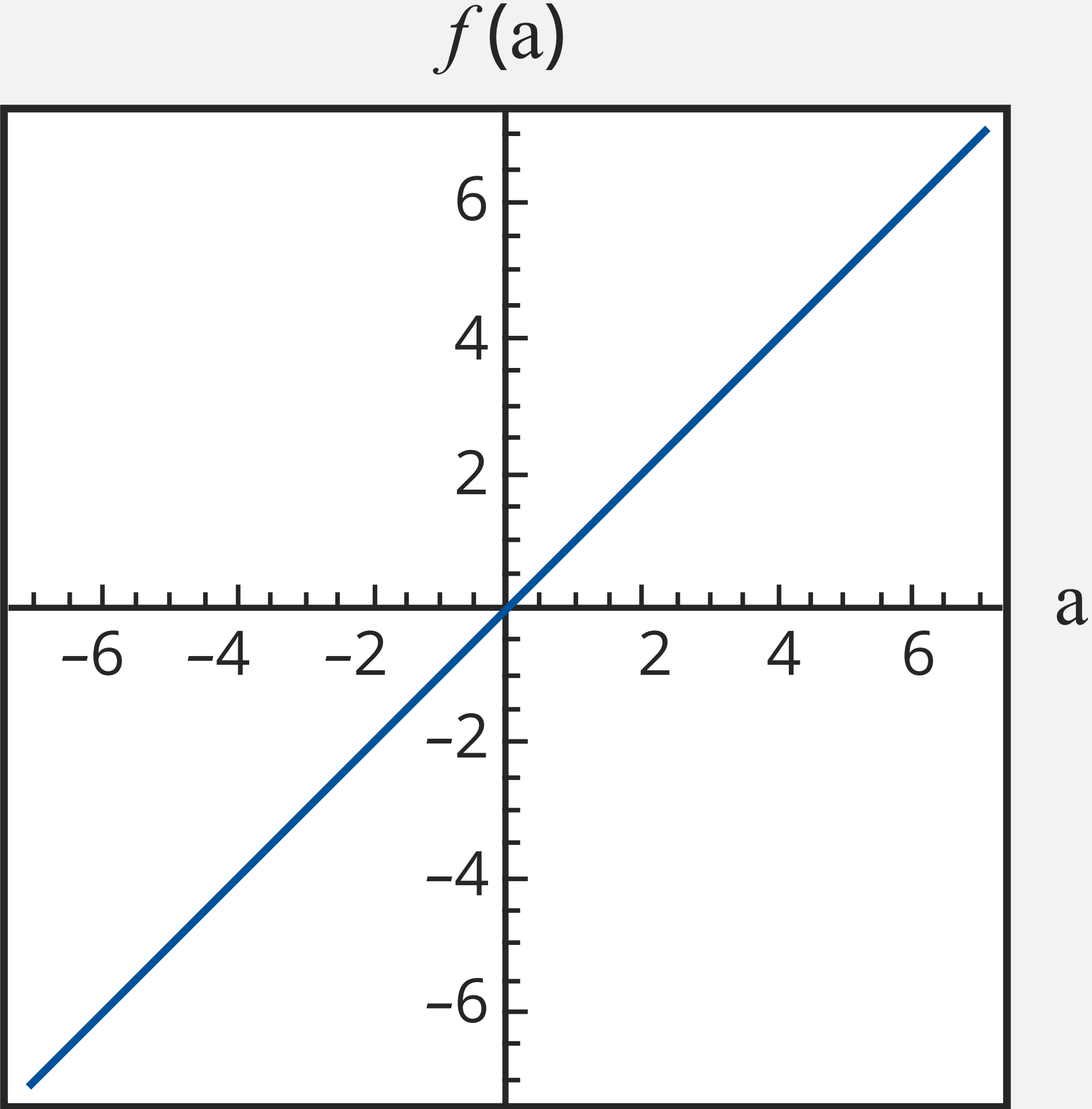


# Activation Functions



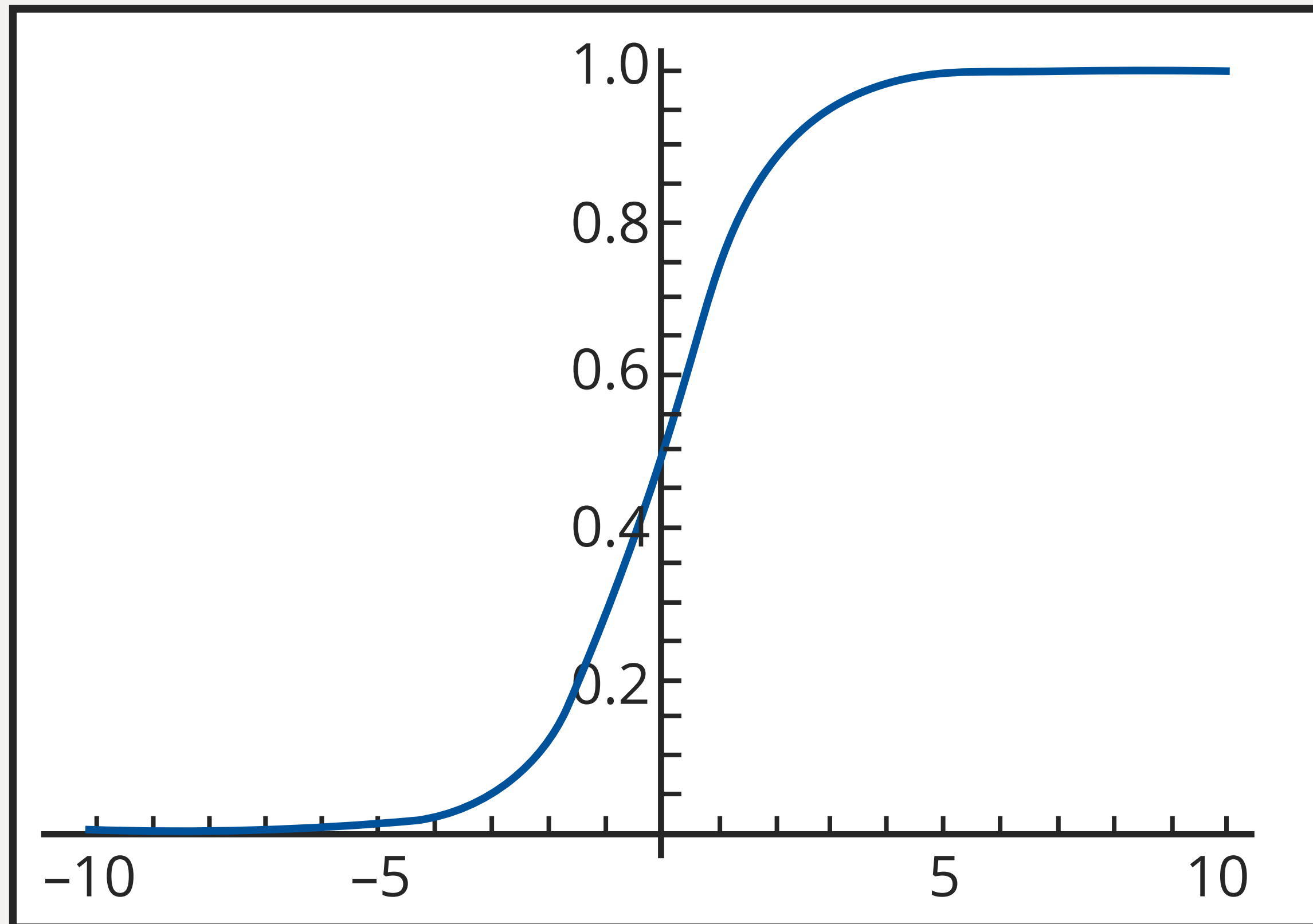


# Linear Activation

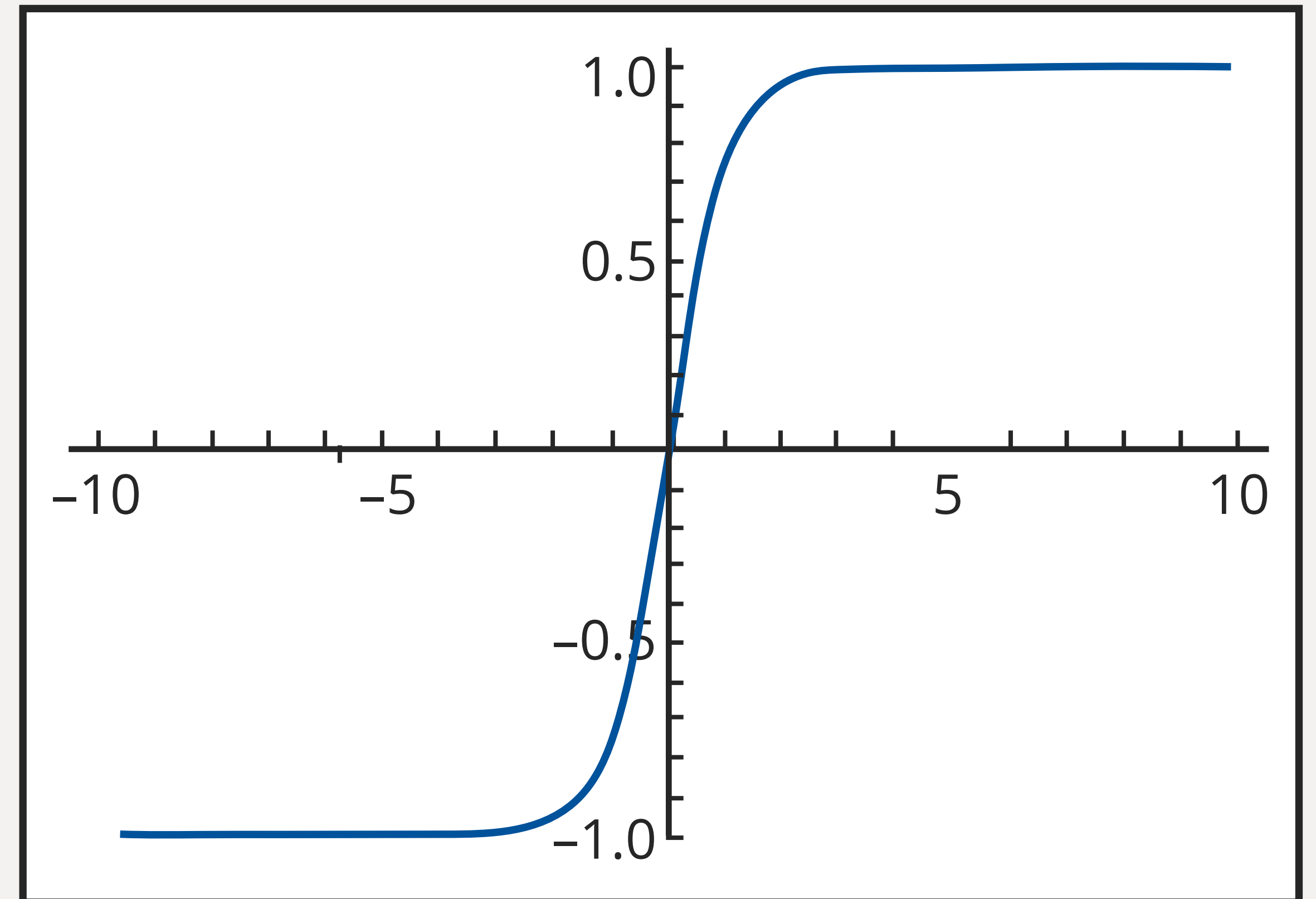


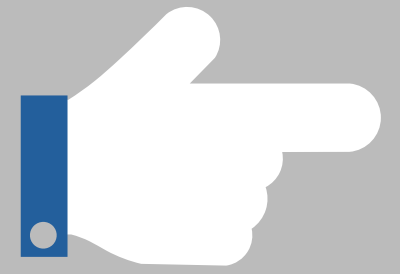
# Non-Linear Activation

$$f(a) = \sigma(a)$$



$$f(a) = \tanh(a)$$

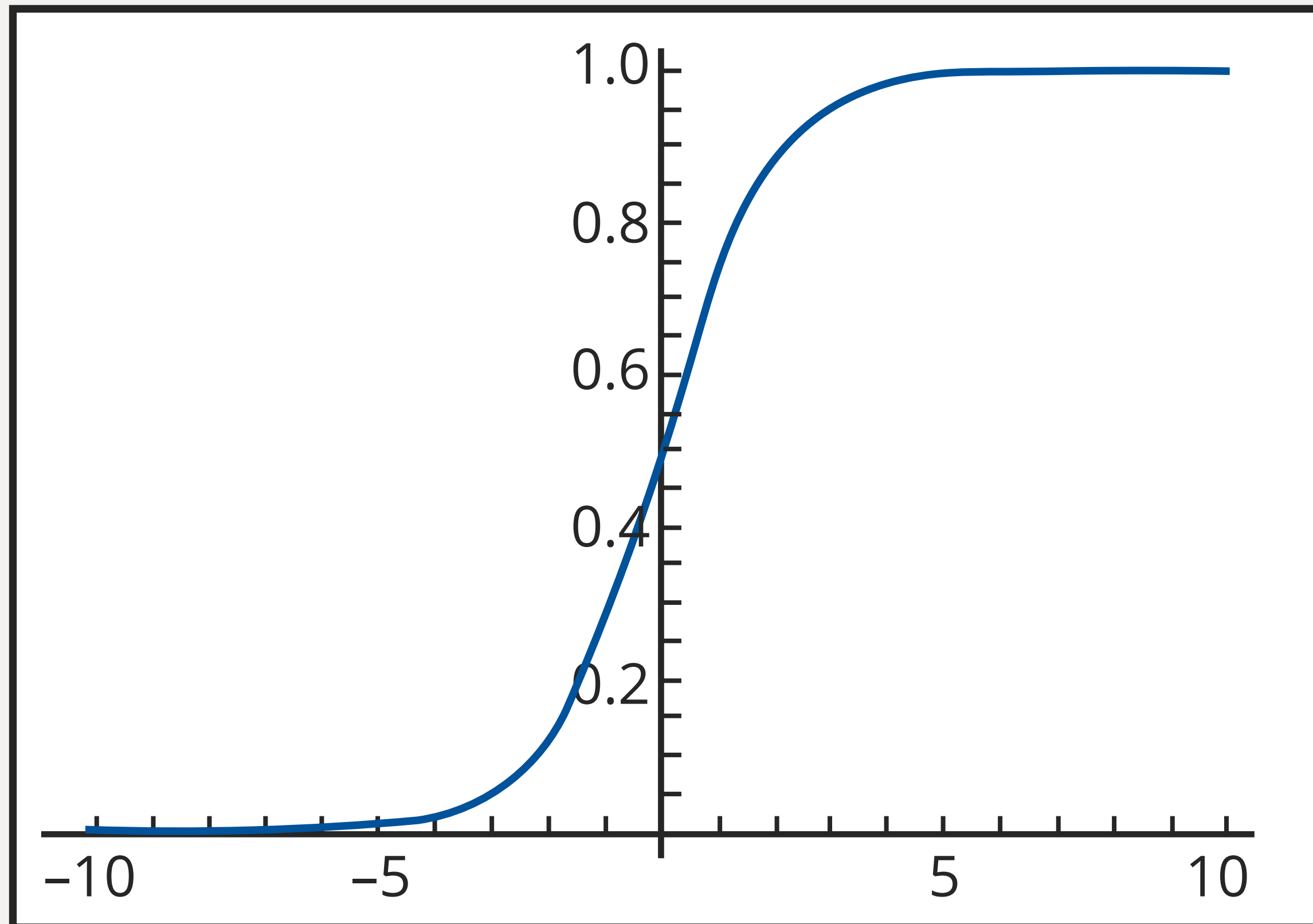




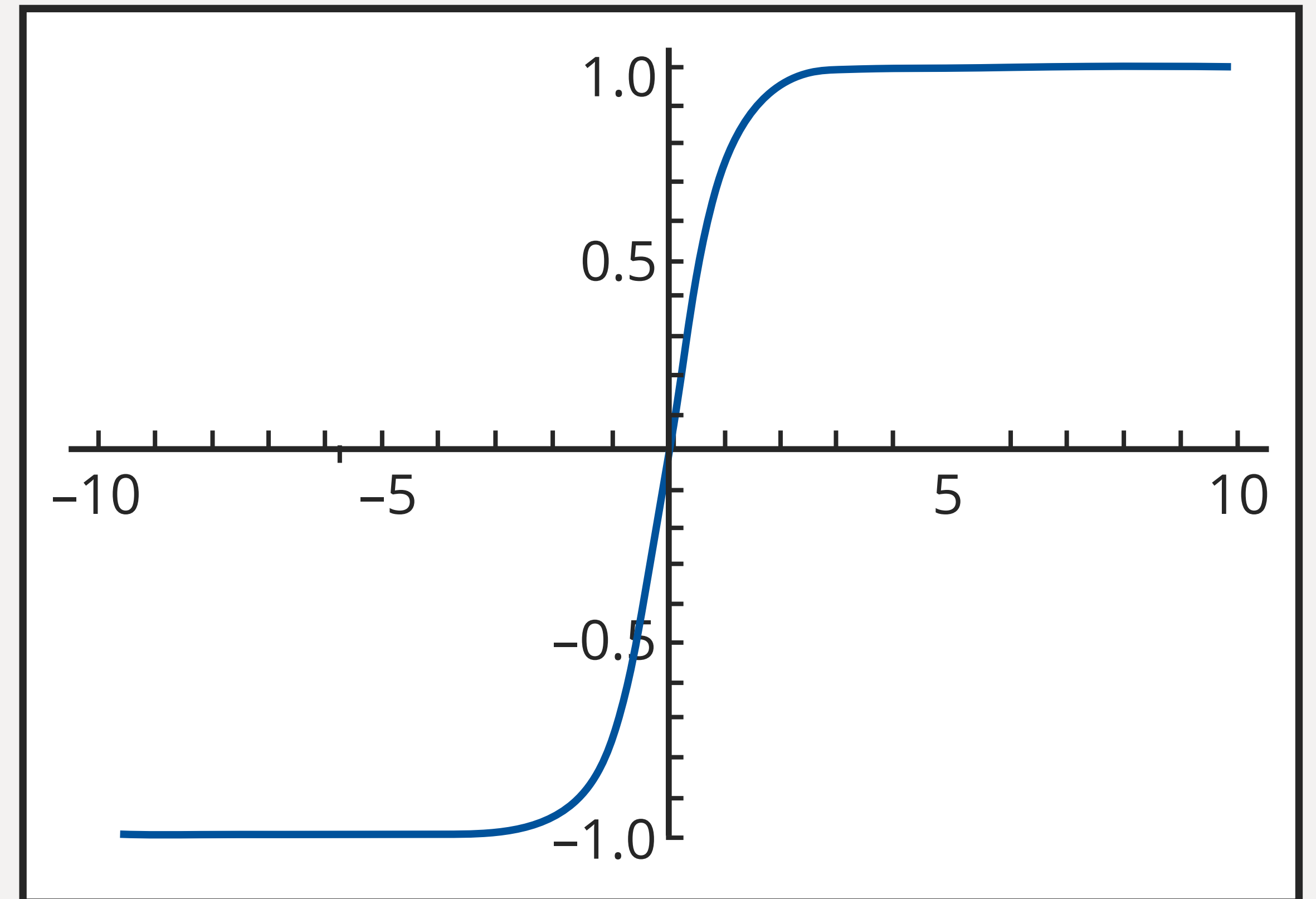
Non-linear activations increase the functional capacity of the neural network

# Non-Linear Activation

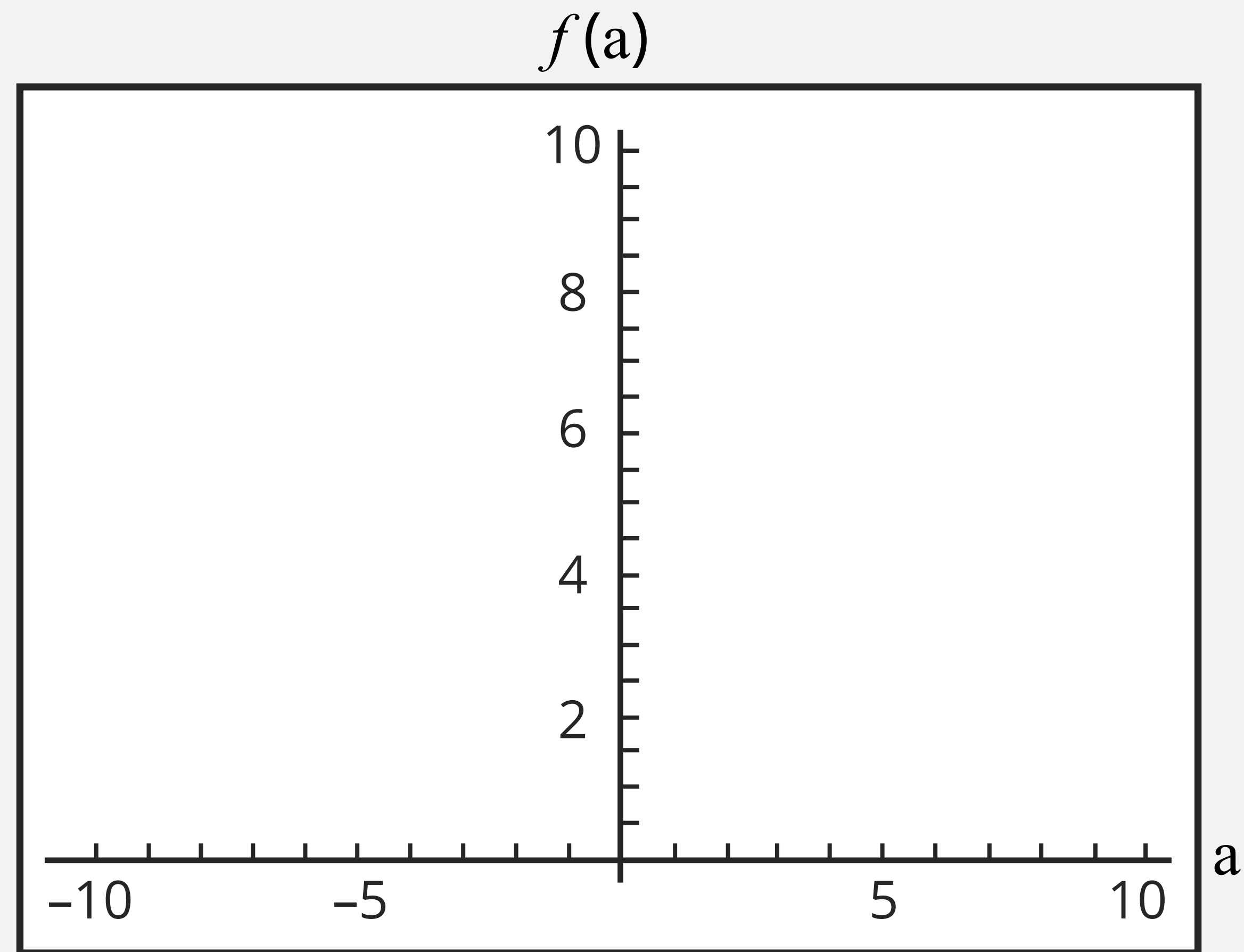
$$f(a) = \sigma(a)$$



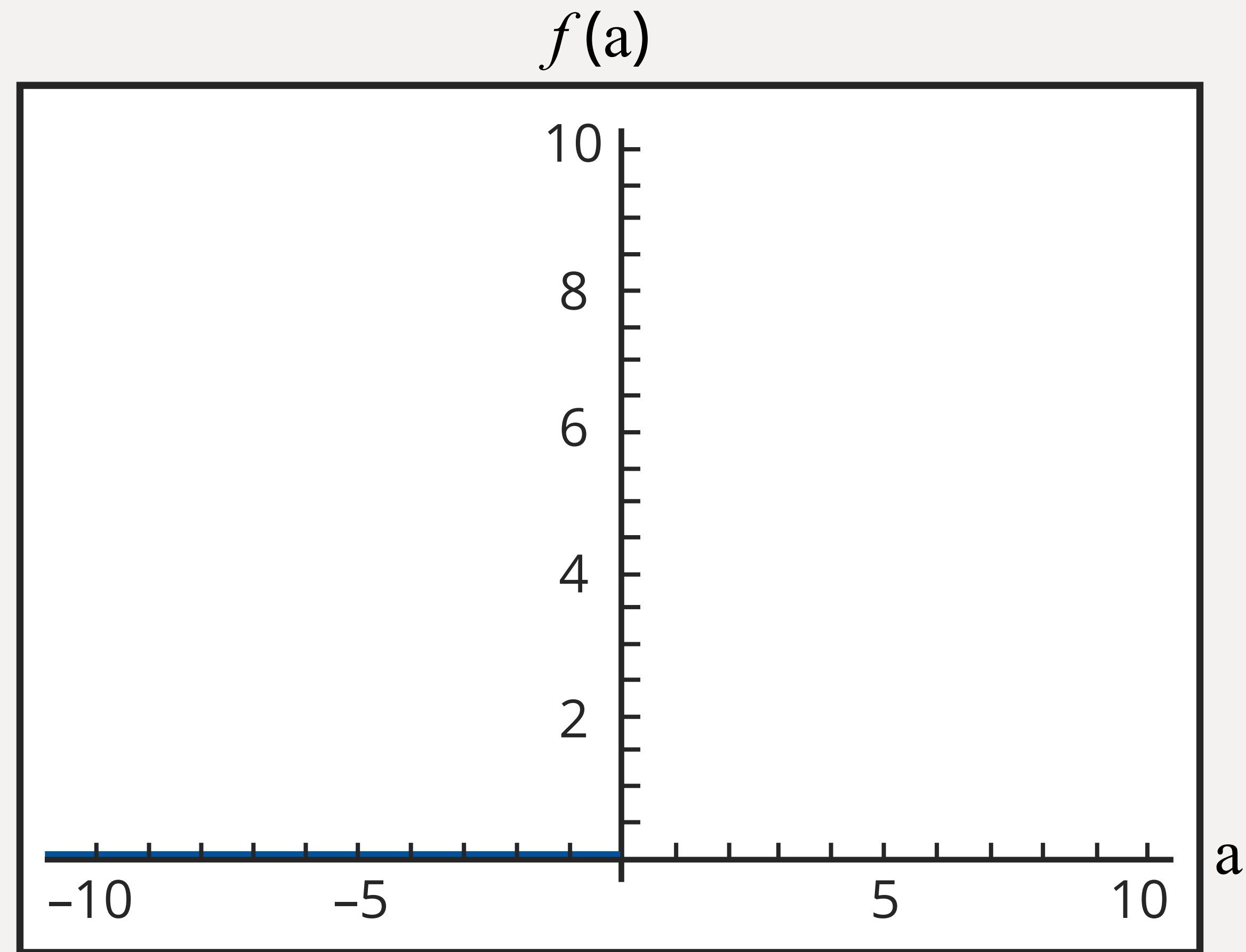
$$f(a) = \tanh(a)$$



# Non-Linear Activation: Rectified Linear Unit (ReLU)



# Non-Linear Activation: Rectified Linear Unit (ReLU)



# Non-Linear Activation: Rectified Linear Unit (ReLU)

