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Task 3

- foo(x,y) = sin(cos(x) + sin(2y))
- Partial derivative of foo with respect to x
    - d/dx (cos(x) + sin(2y)) = -sin(x) + 0
    - d/dx sin = cos
    - cos(cos(x)+sin(2y)) (-sin(x)) = -cos(cos(x) + sin(2y)) (sin(x))
- Partial derivative of foo with respect to y
    - d/dy (cos(x) + sin(2y)) = 0 + 2cos(2y)
    - d/dy sin = cos
    - cos(cos(x) + sin(2y)) (2cos(2y))
- Express the gradient of foo as a function of x and y
    - [[-cos(cos(x) + sin(2y)) (sin(x))], [cos(cos(x) + sin(2y)) (2cos(2y))]]

Task 5

Layer 1, no alpha values (input layer).
Layer 1, z values: [1 1 0] three boolean inputs of either 1 or 0

Layer 2, biases: [-1.5]
Layer 2, weights: [1 1 1]

Task 6

Layer 1, no alpha values (input layer).
Layer 1, z values: [A B]

Layer 2, biases: [-1]
Layer 2, weights: [½ ⅓]

Task 7

Layer 1, no alpha values (input layers)
Layer 1, values: [X]

Layer 2, biases: [-3 7]
Layer 2, weights: [1 -1]

Layer 3, biases: [-1.5]
Layer 3, weights: [1 1]