

Motivations

Neural Networks

Applications

Review

✓

Reading: Lecture Slides

10 min

✓

Quiz: Neural Networks: Representation

5 questions

✓

Programming Assignment: Multi-class Classification and Neural Networks

3h

✓

Congratulations! You passed!

QUIZ 10 MIN

TO PASS 80% or higher

Keep Learning

GRADE

100%

Submit your assignment

Resume

LATEST SUBMISSION GRADE

100%

DUE

Oct 14, 12:29 PM IST

ATTEMPTS

3 every 8 hours

1.

Which of the following statements are true? Check all that apply.

1 / 1 point

✓

Receive grade

Correct

TO PASS 80% or higher

Grade

100%

View Feedback

We keep your highest score

2.

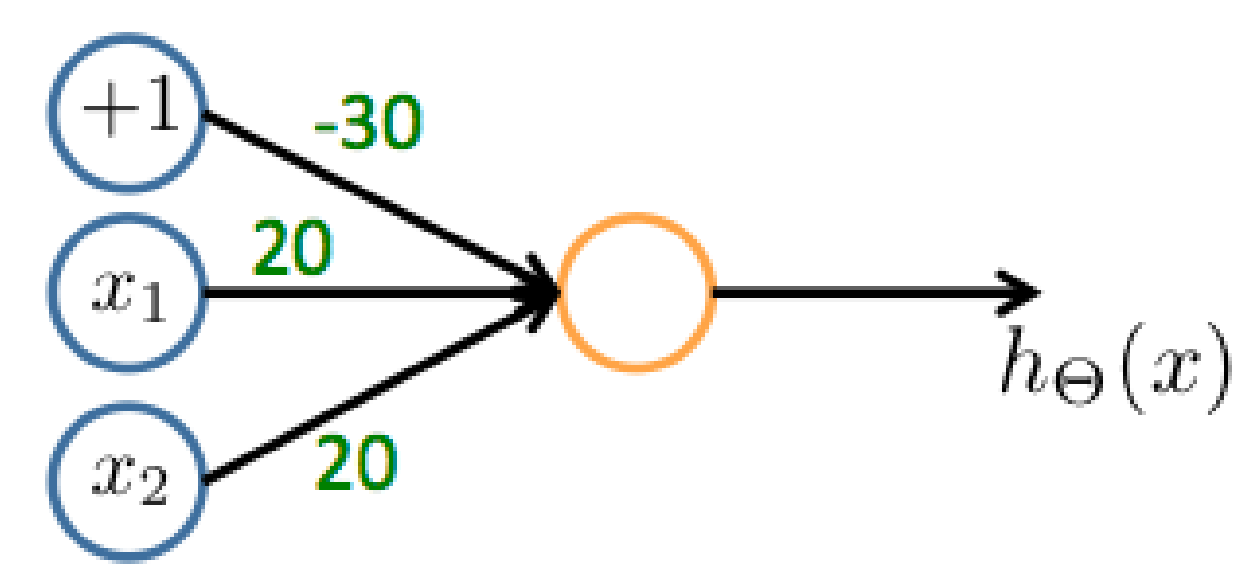
Consider the following neural network which takes two binary-valued inputs $x_1, x_2 \in \{0,1\}$ and outputs $h_{\Theta}(x)$. Which of the following logical functions does it (approximately) compute?

1 / 1 point

👍

🔄

📄



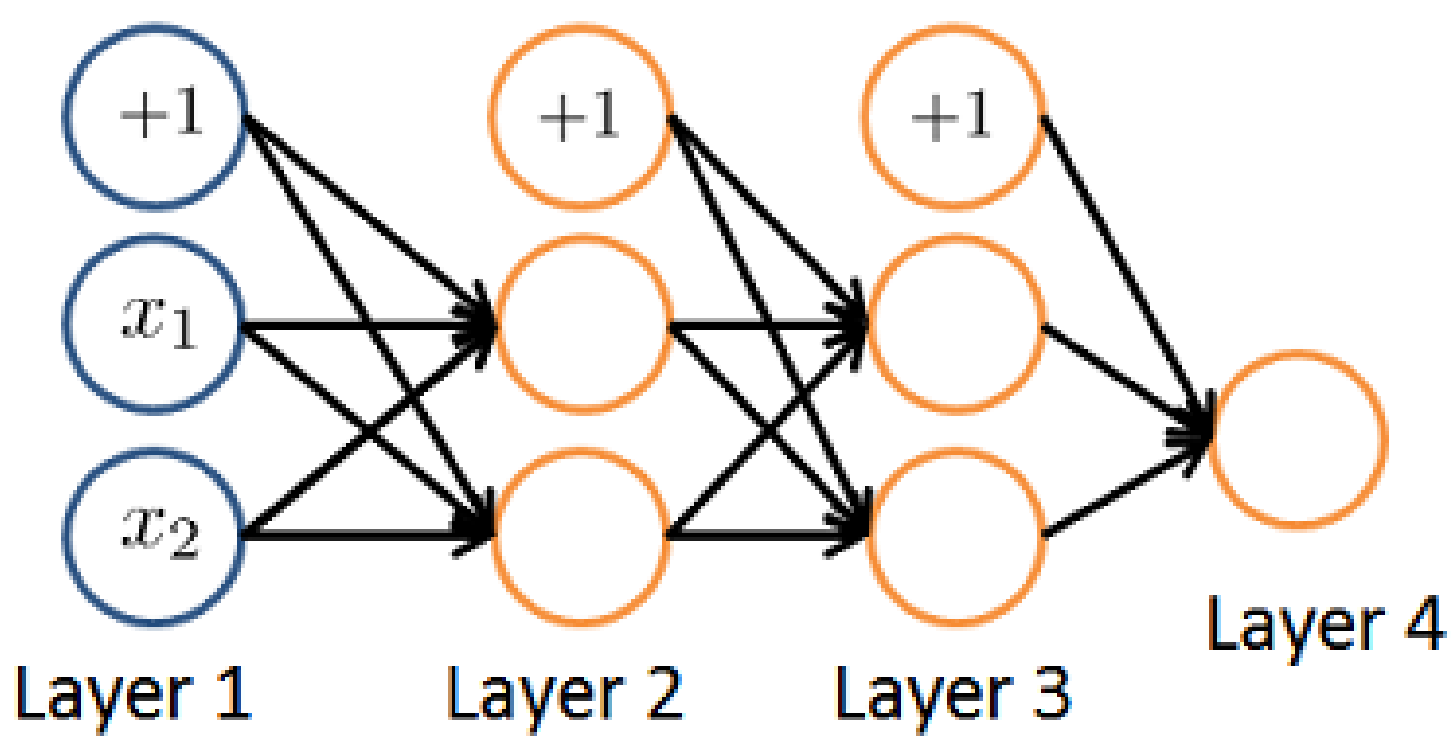
✓

Correct

3.

Consider the neural network given below. Which of the following equations correctly computes the activation $a_1^{(3)}$? Note: $g(z)$ is the sigmoid activation function.

1 / 1 point



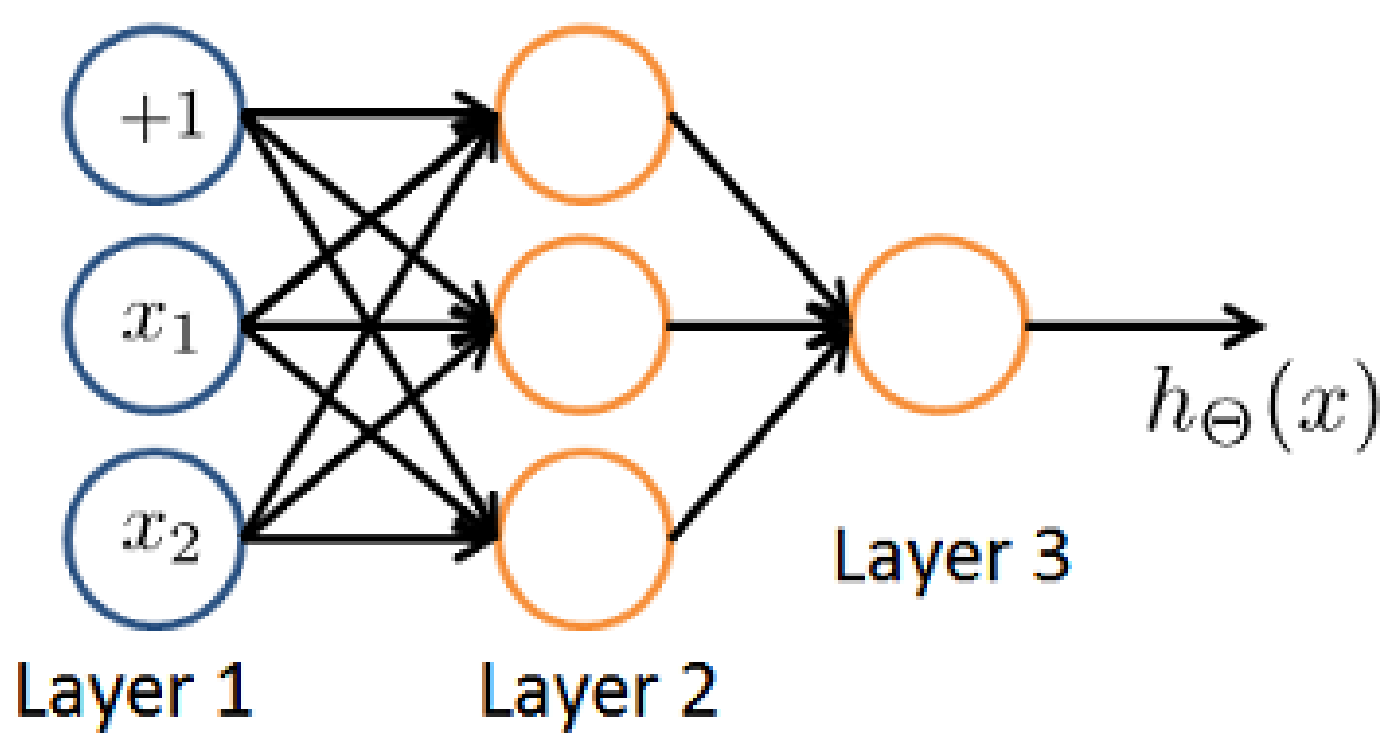
✓

Correct

4.

You have the following neural network:

1 / 1 point



You'd like to compute the activations of the hidden layer $a^{(2)} \in \mathbb{R}^3$. One way to do so is the following Octave code:

```
% Theta1 is Theta with superscript "(1)" from lecture
% ie, the matrix of parameters for the mapping from layer 1 (input) to layer 2
% Theta1 has size 3x3
% Assume 'sigmoid' is a built-in function to compute 1 / (1 + exp(-z))

a2 = zeros (3, 1);
for i = 1:3
    for j = 1:3
        a2(i) = a2(i) + x(j) * Theta1(i, j);
    end
    a2(i) = sigmoid (a2(i));
end
```

You want to have a vectorized implementation of this (i.e., one that does not use for loops). Which of the following implementations correctly compute $a^{(2)}$? Check all that apply.