ECEn/CS 224
ROM Homework Solutions

1. Imagine you have a combinational logic problem to solve which has 7 inputs and 5 outputs. What size ROM must you buy to solve it with? Read the lecture notes to see how to indicate a ROM size.

$$2^7 \text{ x } 5 = 128 \text{ x } 5$$

2. Imagine you have a combinational logic problem to solve which has 22 inputs and 8 outputs. What size ROM must you buy to solve it with?

$$2^{22} \text{ x } 8 = 4{,}194{,}304 \text{ x } 8 = 4\text{M x } 8$$

The notation "M" is commonly used when referencing memory sizes in technical documents, where M is equal to 2^{20} = 1,048,576. You are probably already familiar with MB, or megabyte, which is equal to 1,048,576 bytes.