Midterm 2 Version 1 Solution

April 3, 2020

Question 1

1.

$$100 \div 2 = 50, \textbf{Remainders} 0$$
$$50 \div 2 = 25, \textbf{Remainders} 0$$
$$25 \div 2 = 12, \textbf{Remainders} 1$$
$$12 \div 2 = 6, \textbf{Remainders} 0$$
$$6 \div 2 = 3, \textbf{Remainders} 0$$
$$3 \div 2 = 1, \textbf{Remainders} 1$$
$$1 \div 2 = 0, \textbf{Remainders} 1$$

Then, it follows from above that the binary representation of 100 is $(1100100)_2$.

Question 2

Question 3

Question 4