Repeated Division Algorithm

Quotient	Remainder
311	
155	**1**
77	**1**
38	**1**
19	**0**
9	**1**
4	**1**
2	**0**
1	**0**
0	**1**

$$311_{10} = \mathbf{b}1,0011,0111$$

Note: This algorithm can be reversed to convert from binary to decimal!