

Answer on Question # 41214 – Math - Discrete Mathematics

How many bit strings of length five either begin or end with a 1?

Solution:

Since each bit is either 0 or 1, applying the product rule,

Maximum number of bit strings of length three is $2^3 = 8$. So, we have 8 variants of bit strings of length five that start with 0 and ends with 1, 8 variants that starts with 1 and ends with 0, 8 variants that starts with 1 and ends with 1. Hence, adding all these cases we have 24 different strings.

Answer:

Maximum number of bit strings of length five either begin or end with a 1 is 24.