*Q1. Show that $\binom{n}{0} + \binom{n}{1} + \cdots + \binom{n}{n} = 2^n$

*Q2. A sequence of numbers consists of 10 0's and 5 1's. How many different sequences are there?

Q3. How many diagonals are there in a deca gon?

Q4. How many diagonals are there in an n-gon.

*Q7. What is $\frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \cdots + \frac{1}{9900}$?

Q8.