

Answer on Question #47176 – Math – Combinatorics | Number Theory

How many 4-digit even numbers can be formed from digits 1-9 if each digit can be used only once?

Solution.

In order for the number to be even, the '2', '4', '6' or '8' must be the last digit. The third place can be any one of 8 digits. For each of those the second place can be either one of the 7 remaining digits. And then the first place has to be one of the 6 remaining digits.

Using rule of product, amount of 4-digit numbers that can be formed from digits 1-9 (each digit can be used only once) is equal to $4 \cdot 8 \cdot 7 \cdot 6 = 1344$.

Answer: 1344.