

Answer on Question #58801 – Math – Combinatorics | Number Theory

Question

What is the total number of outcomes of choosing between water, iced tea, or lemonade; with a lemon slice or without; served in a small or large glass?

Solution

First, we have three options for choosing. Next, for each of these options we have two additional options (with a lemon slice or without), and we get number of outcomes:

$$3 \cdot 2 = 6.$$

At last, we have two more options (served in a small or large glass) that give us the total number of outcomes:

$$6 \cdot 2 = 12.$$

Answer: the total number of outcomes is 12.