

Possible Solutions

Jasmine pulled a piece of candy out of the dish without looking and then put it back. The results of her experiment are shown in the table below.

Flavor	Number in Dish
Caramel	TTTT
Coconut	TTTT I
Milk Chocolate	TTTT
Peanut Butter	III

Using the experimental data, if a piece of candy is selected and replaced 285 times, predict the number of times Jasmine would get a peanut butter candy bar.

Solution 1

$$P(\text{Peanut Butter}) = ?$$

There are 3 Peanut Butter tallies out of a total of 19 tallies.

$$P(\text{Peanut Butter}) = \frac{3}{19}$$

$$\frac{3}{19} \times 285 = \frac{3}{19} \times \frac{285}{1} = \frac{855}{19} = 45$$

Using this experimental data, Jasmine would get a peanut butter candy bar 45 times.

Solution 2

$$P(\text{Peanut Butter}) = ?$$

There are 3 Peanut Butter tallies out of a total of 19 tallies.

$$P(\text{Peanut Butter}) = \frac{3}{19}$$

$$\frac{3}{19} = \frac{P}{285} \quad \text{Solve using cross products}$$

$$3 \times 285 = 19 \times P$$

$$855 = 19P$$

$$\frac{855}{19} = \frac{19P}{19}$$

$$45 = P$$

Using this experimental data, Jasmine would get a peanut butter candy bar 45 times.