

Theoretical Probability vs Experimental Probability

Grade 5

Elderslie Primary and Infant School

WorkSheet

Read the scenario then answers all the following questions.

Kamaria was rolling dice with her classmates. All the dices are numbered 1(one) to 7(seven).

After rolling 25 times Kamaria was able to roll the number 6(six) 9(nine) times. No other person rolled the number of 6's that she rolled.

1. What is the theoretical probability that Kamaria will roll a 6 on the die?
a. $\frac{6}{6}$ b. $\frac{3}{6}$ c. $\frac{2}{6}$ d. $\frac{1}{6}$
2. What was the experimental probability of rolling a 6 on the die after 25 rolls?
a. $\frac{6}{9}$ b. $\frac{9}{25}$ c. $\frac{6}{25}$ d. $\frac{25}{6}$
3. What is the theoretical probability that Kamaria will roll an even number on the die when she rolls again?
a. $\frac{3}{7}$ b. $\frac{4}{7}$ c. $\frac{3}{4}$ d. $\frac{4}{3}$
4. What is the theoretical probability that she will roll an odd number on the die when she rolls again?
a. $\frac{3}{7}$ b. $\frac{4}{7}$ c. $\frac{3}{4}$ d. $\frac{4}{3}$
5. What are her chances of rolling a composite number on the die when she rolls again?
a. Impossible b. unlikely c. certain d. likely
6. What are her chances of rolling a prime number on the die when she rolls again?
a. Impossible b. unlikely c. certain d. likely
7. Are you able to provide her experimental probability of rolling a 3 on the die?
a. $\frac{3}{25}$ b. not sure c. no d. yes