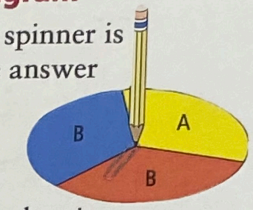
Example 1: Determine Probabilities From a Tree Diagram

A spinner is divided into three equal regions as shown. The spinner is spun twice. For each probability you determine, express the answer as a fraction, a decimal, and a percent.



a) What is the probability of spinning A on the first spin?

b) Draw a tree diagram to represent the sample space for both spins.

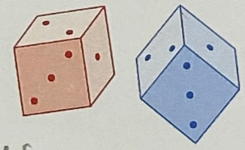
c) What is the probability of spinning A followed by B: $P(\text{A then B})$?

d) What is the probability of getting the same letter on both spins: $P(\text{A, A})$ or $P(\text{B, B})$?

d) P(Doubles) 5/9 , 0.5 , 55.5%

xample 2: Determine Probabilities From a Table

wo standard six-sided dice are rolled. One die is ue and the other is red. For each probability you termine, express the answer as a fraction, a cimal, and a percent.



Create a table to represent the sample space. See definition page

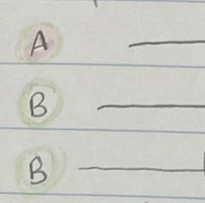
What is the probability of rolling a sum greater than ten? $\frac{3}{36} \to \frac{1}{12}$, $0.08\overline{3}$, $8.\overline{3}\%$

What is the probability that the number on the red die is one larger than the number on the blue die? $\frac{5}{36}$, $0.13\overline{8}$, $13.\overline{8}\%$

What is the probability that the sum of the two numbers is less than 11? $\frac{33}{36} \to \frac{11}{12}$, 0.916, 91.6%

a) $\frac{1}{3}$, $0.\overline{3}$, $33.\overline{3}\%$

b) First Spin Second Spin



9 possible outcomes
$3 \cdot 3 = 9$

c) $P(\text{A then B}) = \frac{2}{9}$, $0.\overline{2}$, $22.\overline{2}\%$

d) $P(\text{Doubles}) = \frac{5}{9}$, $0.\overline{5}$, $55.\overline{5}\%$

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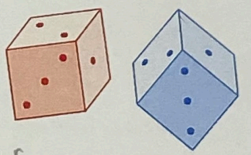

a) Create a table to represent the sample space. See definition page

b) What is the probability of rolling a sum greater than ten? $\frac{3}{36} \to \frac{1}{12}$, $0.08\overline{3}$, $8.\overline{3}\%$

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