

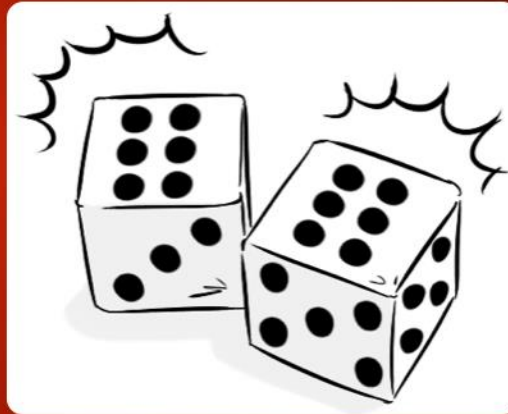
# WOULD YOU RATHER...

Flip 2 coins...



...win if they match

Roll 2 dice...



...win if no match

Justify your reasoning with mathematics. Tell any assumptions you have made.

$$P(\text{event } A) = \frac{n(\text{event } A)}{n(\text{sample space})}$$

A certain motorcycle license plate consists of 5 digits that are randomly selected. No digit is repeated. What is the probability of getting a license plate consisting of all even digits?

Decide if the problem involves permutations or combinations. Why?

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The sample space  $S$  consists of permutations of \_\_\_ digits selected from \_\_\_ digits.

$$n(S) = \boxed{\phantom{0}}^P \boxed{\phantom{0}} = P = \frac{\phantom{0}!}{\phantom{0}!} =$$

Event  $A$  consists of permutations of a license plate with \_\_\_ digits.

$$n(A) = \boxed{\phantom{0}}^P \boxed{\phantom{0}} = P = \frac{\phantom{0}!}{\phantom{0}!} =$$

The probability of getting a license plate with \_\_\_ digits is

$$P(A) = \frac{n(A)}{n(S)} = \frac{\phantom{0}}{\phantom{0}} = \frac{\phantom{0}}{\phantom{0}}$$