

Assignment

Write

Complete each sentence.

1. When all probabilities in a probability model are the same, it is called a _____.
2. When all probabilities in a probability model are not the same, it is called a _____.
3. A _____ is a list of each possible outcome along with its probability.

Remember

When the probabilities of all the outcomes in a situation are represented in a probability model, the sum of the probabilities is 1.

Practice

1. Use the probability model to determine each probability.

Outcome	1	2	3	4	5	6	7	8
Probability	$\frac{2}{25}$	$\frac{4}{25}$	$\frac{1}{25}$	$\frac{5}{25}$	$\frac{2}{25}$	$\frac{4}{25}$	$\frac{3}{25}$	$\frac{4}{25}$

- a. $P(4)$
 - b. $P(7)$
 - c. $P(\text{less than } 7)$
 - d. $P(\text{greater than } 8)$
 - e. $P(\text{odd number})$
 - f. $P(\text{less than } 10)$
 - g. Is this a uniform probability model? Explain your answer.
2. Use the probability model to determine each probability.

Outcome	A	B	C	D	E	F
Probability	$\frac{2}{20}$	$\frac{5}{20}$	$\frac{2}{20}$	$\frac{7}{20}$	$\frac{1}{20}$	$\frac{3}{20}$

- a. $P(B)$
- b. $P(F)$
- c. $P(\text{not } C)$
- d. $P(\text{consonant})$
- e. $P(\text{not } A)$
- f. $P(\text{vowel})$
- g. Is this a uniform probability model? Explain your answer.

Stretch

Mark flipped a coin 10 times and got 70% heads and 30% tails. What will happen to these percents as Mark continues flipping the coin? Try it out to test your prediction.

Review

- A drawer contains 15 T-shirts. There are 4 blue, 9 green, and 2 black T-shirts. A T-shirt is grabbed at random from the drawer. Which statement(s) correctly describe the likelihood of an event? Select True or False and explain your reasoning.
 - It is unlikely that a black T-shirt will be selected. True False
 - It is certain that a green T-shirt will be selected. True False
 - It is impossible that a red T-shirt will be selected. True False
 - It is likely that a blue T-shirt will be selected. True False
- A local park rents cabins for people who want to vacation by the forest. The fee for the rental is \$27 per night. There is also a \$55 cleaning and maintenance charge that is added to the total bill.
 - Define variables for the number of days that a cabin is rented and the cost of the rental. Use the variables to write an equation that represents the cost to rent the cabin, given the number of days that the cabin is rented.
 - Use the equation to determine how many days the cabin can be rented for \$190. Show all of your work.
- Use the Distributive Property to rewrite each expression.
 - $-7(-5g + 12) - 27$
 - $\frac{-6.4y + 14.4}{-0.16}$