THIRD SPACE LEARNING

Probability Check for Understanding

A 15 question retrieval quiz for students in grades 7, 8, 9, 10, 11 and 12.

Grades 7 to 12

Questions

Name: ..... Class: .....

Date: ..... Score: .....

1 Cameron rolls a dice. What is the probability of Cameron rolling a prime number?

Answer

2 There are 4 blue marbles, 6 green marbles, and 3 yellow marbles in a jar. If you randomly select a marble from the jar, what is the probability of NOT selecting a green marble?

Answer

3 You roll a dice and flip a coin at the same time. What is the probability of rolling a 6 and flipping a heads?

Answer

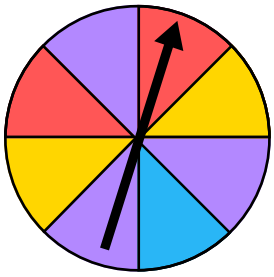
4 You flip a coin 50 times and get tails 24 times. What is the experimental probability of getting tails?

Answer

5 If you flip a coin, what is the theoretical probability of flipping a tails?

Answer

6 What is the sample space of the spinner below?
(All 8 sections of the spinner are equal in area)



Answer

7 The university bookstore sells blue and white bags printed with the university logo. Customers can either choose a backpack, a fanny pack, a duffel bag, or a cinch sack in either blue or white. Make a tree diagram of all the styles of bags sold at the shop.

9 In the local ice cream shop, there are 12 different flavors of ice cream, 3 different types of cones, and 5 different toppings. How many combinations can a customer choose to make an ice cream cone if they choose 1 flavor of ice cream, 1 cone, and 1 topping?

Answer

10 You roll two dice. What is the probability of rolling doubles?

Answer

11 Three fifths of an environmental class worked in the lab while two-fifths of the class worked out in the field. Out of the students in the class that worked in the field, 11% collected water samples. What is the probability that a randomly chosen student from the environmental class worked in the field and collected water samples?

Answer

15 There are 6 green tiles and 6 yellow tiles with the number 1 in a bag. There are also 4 green tiles and 8 yellow tiles with the number 10 in the bag. What is the probability that a randomly selected tile is green or has the number 10?

Answer

12 Using the data in the table below. What is the probability that a randomly selected person is female given that the person is left handed?

	Right Handed	Left Handed
Male	123	27
Female	135	15

Answer

13 Using the same data from question #12, what is the probability that a randomly selected person is right handed given that they are male?

Answer

14 A penny is tossed 4 times. What is the probability of getting 3 heads and 1 tail?

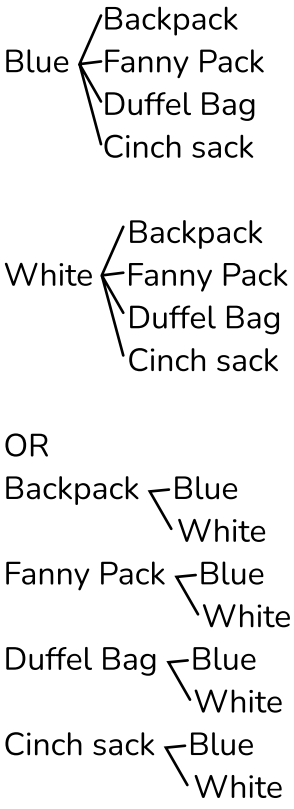
Answer

15 You have to create a 4 digit PIN number. What is the probability of randomly selecting a PIN number where the digits do not repeat?

Answer

Answers

Question number	Question	Answers	Standard
1	Cameron rolls a dice. What is the probability of Cameron rolling a prime number?	The prime numbers on a dice are 2, 3, 5. Probability of rolling a prime number is $\frac{3}{6}$ or $\frac{1}{2}$	7.SP.C.5
2	There are 4 blue marbles, 6 green marbles, and 3 yellow marbles in a jar. If you randomly select a marble from the jar, what is the probability of NOT selecting a green marble?	13 marbles total in the jar, and 7 of them are not green. Probability of NOT selecting a green marble is $\frac{7}{13}$	7.SP.C.5
3	You roll a dice and flip a coin at the same time. What is the probability of rolling a 6 and flipping a heads?	Probability of rolling a 6 and flipping a heads is $\frac{1}{12}$	7.SP.C.8
4	You flip a coin 50 times and get tails 24 times. What is the experimental probability of getting tails?	Experimental probability is $\frac{24}{50}$ or $\frac{12}{25}$	7.SP.C.6
5	If you flip a coin, what is the theoretical probability of flipping a tails?	Theoretical probability is $\frac{1}{2}$	7.SP.C.5
6	What is the sample space of the spinner below? (All 8 sections of the spinner are equal in area)	Sample space: S = {red section, yellow section, purple section, blue section, purple section, yellow section, red section, purple section}	7.SP.C.5

Question number	Question	Answers	Standard
7	The university bookstore sells blue and white bags printed with the university logo. Customers can either choose a backpack, a fanny pack, a duffel bag, or a cinch sack in either blue or white. Make a tree diagram of all the styles of bags sold at the shop.		7.SP.C.8
8	In the local ice cream shop, there are 12 different flavors of ice cream, 3 different types of cones, and 5 different toppings. How many combinations can a customer choose to make an ice cream cone if they choose 1 flavor of ice cream, 1 cone, and 1 topping?	180 combinations	HSS.CP.9
9	You roll two dice. What is the probability of rolling doubles?	Probability = $\frac{6}{36}$ or $\frac{1}{6}$	HSS.CP.A.2

Question number	Question	Answers	Standard
10	Three fifths of an environmental class worked in the lab while two-fifths of the class worked out in the field. Out of the students in the class that worked in the field, 11% collected water samples. What is the probability that a randomly chosen student from the environmental class worked in the field and collected water samples?	Probability = 0.044 or 4.4% or $\frac{22}{500}$ or $\frac{11}{250}$	HSS.CP.B.6
11	There are 6 green tiles and 6 yellow tiles with the number 1 in a bag. There are also 4 green tiles and 8 yellow tiles with the number 10 in the bag. What is the probability that a randomly selected tile is green or has the number 10?	Probability = $\frac{3}{4}$ or 0.75 or 75%	HSS.CP.B.7
12	Using the data in the table below. What is the probability that a randomly selected person is female given that the person is left handed?	Probability = $\frac{15}{42}$ or $\frac{5}{14}$	HSS.CP.A.4
13	Using the same data from question #12. What is the probability that a randomly selected person is right handed given that they are male?	Probability = $\frac{123}{150}$ or $\frac{41}{50}$	HSS.CP.A.4
14	A penny is tossed 4 times. What is the probability of getting 3 heads and 1 tail?	Probability = $\frac{4}{16}$ or $\frac{1}{4}$	HSS.CP.B.8
15	You have to create a 4 digit PIN number. What is the probability of randomly selecting a PIN number where the digits do not repeat?	Probability $\frac{5040}{10000}$ or $\frac{504}{1000}$ or $\frac{252}{500}$ or $\frac{126}{250}$ or $\frac{63}{125}$	HSS.CP.B.9

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