

# SIMULATIONS & PROBABILITY

Determine which would be the *best simulation experiment* for each situation. Find your answer in one of the three answer boxes. Using the problem number and color that corresponds to the answer you picked, color following page!

#		ANSWER 1	ANSWER 2	ANSWER 3
1	A goalie saves half of the attempted shots on a goal during a game. Design a simulation to predict how many of 12 shots will be saved.	Flip a coin 12 times. Heads is a save, Tails is a miss. BROWN	Spin a 12 section spinner once. BLACK	See how many goals you can score in 12 shots. GRAY
2	A basketball player makes 75% of his free-throw attempts. Design a simulation to predict how many free throws he will make if he attempts 20 in a game.	Shoot a basketball 20 times. BLACK	Flip a coin 20 times. Heads you make it, Tails you don't. BROWN	Spin a spinner 20 times that has three 3 blue sections and 1 red. RED
3	A true / false quiz has 25 questions. Each question has 2 choices and 1 correct answer. Design a simulation to predict how many answers you will get correct if you guess on each one.	Spin a four sectioned spinner 25 times. BROWN	Flip a coin 25 times. Heads is correct and Tails is incorrect. BLACK	Practice by guessing on a real test in your class. WHITE
4	12 candy canes are in a bag, 8 blue and 4 green. You pick one without looking. What is the probability it is green?	$\frac{1}{2}$ ORANGE	$\frac{1}{3}$ PURPLE	$\frac{1}{4}$ YELLOW
5	You reach into your sock drawer without looking. You have 9 white pairs and 11 colored pairs. What is the probability you get a white pair?	0.11 ORANGE	0.55 BROWN	0.45 GREEN

#		ANSWER 1	ANSWER 2	ANSWER 3
6	There are 25 remaining slots on a field trip. The students are chosen at random to go. If there are 16 boys in your class and 9 girls, what is the probability a girl is chosen first?	0.36 WHITE	0.09 BROWN	0.64 BLACK
7	A candy jar has 40 pieces of candy. 22 are chocolate, 10 are licorice, 5 are lollipops and 3 are taffy. You choose a lollipop and decided to put it back. What is the probability you pull a lollipop and then a piece of chocolate?	$\frac{27}{40}$ YELLOW	$\frac{11}{160}$ ORANGE	$\frac{11}{156}$ RED
8	At a restaurant I can choose from 3 different sizes of pizza, two different types of crust and 6 different toppings. How many different pizzas can I make?	36 BLUE	11 RED	18 GREEN
9	You toss four coins at the same time. What is the probability you land on one head and three tails?	$\frac{1}{2}$ PURPLE	$\frac{1}{4}$ ORANGE	$\frac{1}{16}$ YELLOW
10	You roll three dice at the same time. What is the probability one lands on a 3, the other lands on a number less than 5 and the third dice lands on a number greater than 4?	$\frac{1}{216}$ PINK	$\frac{1}{36}$ PURPLE	$\frac{1}{27}$ GRAY