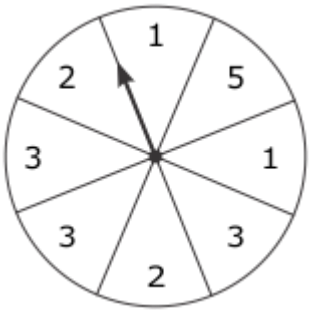
1. At a middle school, $\frac{1}{5}$ of the students have a cell phone. If a student is chosen at random, what is the probability the student does ***not*** have a cell phone?

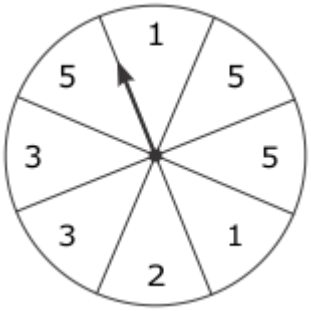
A 20%
B 25%
C 50%
D 80%

2. Which spinner has a greater likelihood of landing on 5 rather than 3?

A



C



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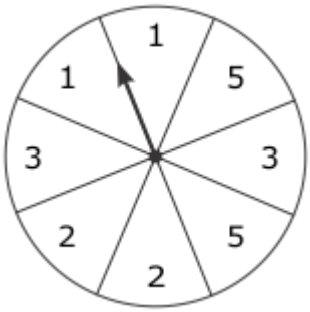

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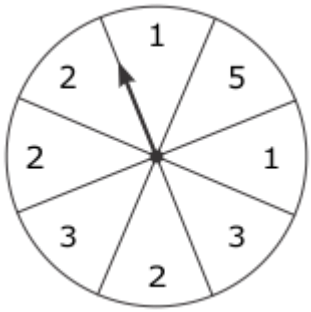


3. An ice-cream shop has 20 cartons of ice cream. Five of them are chocolate, ten are vanilla, and five are other flavors. Maria concludes that if she picks a carton without looking, there is an equal chance that she will pick a carton of chocolate ice cream as there is that she will pick another flavor of ice cream. Is Maria's conclusion correct?

A Yes, because there are two possible choices.
B Yes, because the probability of either event is $\frac{1}{2}$.
C No, because the probability of picking a carton of chocolate ice cream is closer to 1.
D No, because the probability of picking a carton of chocolate ice cream is closer to 0.

4. The table lists the probability of four events occurring.

Event	Probability
A	0.08
B	0.70
C	0.20
D	0.02

Which event is **least** likely to occur?

A Event A
B Event B
C Event C
D Event D

5. There are red, blue, and yellow pencils in a cup.

- Micah randomly selects a pencil.
- The probability of randomly selecting a red pencil is $\frac{1}{5}$.
- The probability of randomly selecting a blue pencil is $\frac{1}{4}$.

What is the probability Micah randomly selects a yellow pencil?

A 20%
B 25%
C 45%
D 55%

6. On Noah's baseball team, 3 out of the 12 players are left-handed. If a player is chosen at random, what is the probability the player is right-handed?

A 0.25
B 0.30
C 0.70
D 0.75

7. Lillian will roll two number cubes, each labeled 1 through 6. What is the likelihood the sum of the two numbers showing will equal 12?

A impossible
B not likely
C likely
D certain

8. Which value does **not** represent the probability of an event?

A 0.0
B 0.5
C 1.0
D 2.0

9. There are red, blue, and black marbles in a bag.

- The probability of pulling out a red marble is $\frac{2}{5}$.
- The probability of pulling out a black marble is $\frac{1}{10}$.
- One marble is pulled out at random.

What is the probability the marble will be blue?

A $\frac{7}{10}$
B $\frac{3}{5}$
C $\frac{1}{2}$
D $\frac{3}{10}$

10. A bag is filled with 100 marbles that are all the same size and shape. Each marble has one color. The number of marbles and their colors are listed below.

- 21 green
- 35 blue
- 18 red
- 26 yellow

If one marble is randomly selected from the bag, which word **best** describes the probability of it being green?

A certain
B likely
C unlikely
D impossible

11. Each letter of the word 'Mississippi' is written on an individual card and put in a bag. A card is randomly chosen from the bag. What is the likelihood of a consonant being chosen?

A impossible
B unlikely
C likely
D certain

12. Ms. Patel surveyed her class to find out where homework is completed. She recorded the data in a table below.

Location	Responses
home	100
morning study hall	50
after school study hall	48
friend's house	4

Which two locations are Ms. Patel's students ***almost***equally likely to complete their math homework?

A. after school study hall or morning study hall

B. friend's house or after school study hall

C. morning study hall or friend's house

D. home or morning study hall

15. A jar is filled with pennies, nickels, and dimes. The probability of picking a penny is $\frac{1}{4}$, and the probability of picking a dime is $\frac{1}{3}$. What is the probability of picking a nickel?

A. $\frac{1}{5}$

B. $\frac{1}{3}$

C. $\frac{5}{12}$

D. $\frac{7}{12}$

16. Sally has a deck of cards. There are 26 red cards and 26 black cards. What is the likelihood Sally will randomly select a red card?

A. likely

B. unlikely

C. impossible

D. neither likely nor unlikely

17. As part of an experiment, Janelle spins a multicolored spinner 100 times and concludes that the probability of the arrow landing on orange is an unlikely event. If Janelle's conclusion is true, which of these could be the probability of the event?

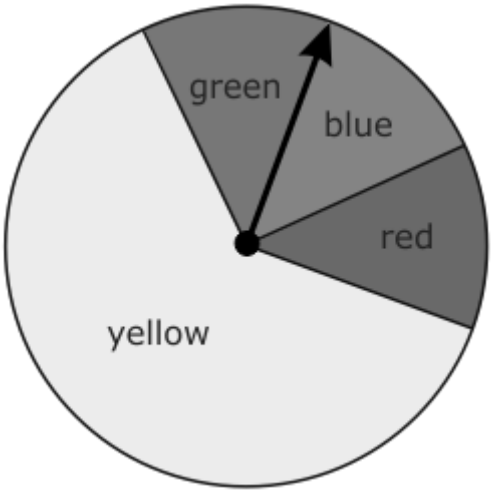
A. 0

B. 0.3

C. 0.5

D. 1

18. The probability of spinning green, red, or blue on the spinner below is $\frac{1}{8}$.



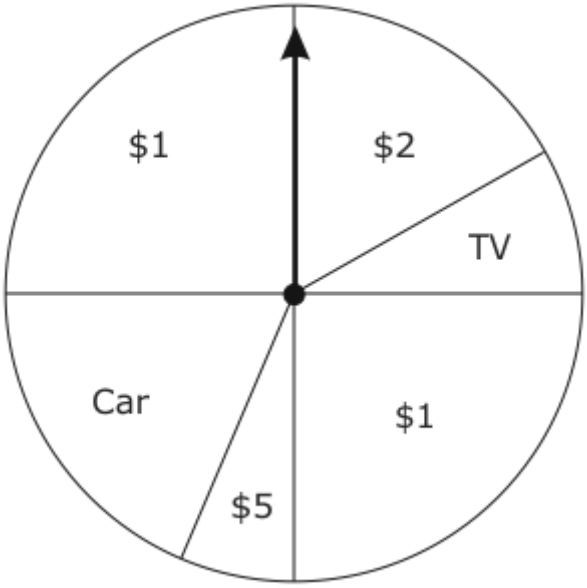
What is the probability of spinning yellow?

A. $\frac{5}{8}$

B. $\frac{6}{8}$

C. $\frac{7}{8}$

19. A prize wheel is spun one time to determine what prize a person will win.



What is the likelihood a person will win a car?

A. impossible

B. unlikely

C. likely

20. Jacob rolls a number cube numbered 1 to 6. What is the likelihood Jacob rolls a number less than 7?

A. definite

B. likely

C. not likely

D. impossible

21. Denise had a bag full of 24 cubes consisting of red, blue, and black cubes. She concluded that the probability of picking a blue cube from the bag without looking is neither a likely nor an unlikely event. How many blue cubes could there be in the bag?

A. 3

B. 8

C. 12

D. 20

22. In Mandy's purse, there are 7 quarters, 2 dimes, and 1 nickel. If Mandy pulls out one coin without looking, what is the likelihood the coin will be a penny?

A. likely

B. unlikely

C. impossible

23. There are four colors of pencils in a large box. John will randomly select a pencil from the box. The table below shows the probability of selecting each color.

Color	Probability
Blue	$\frac{1}{5}$
Red	$\frac{2}{5}$
Yellow	$\frac{3}{10}$
Green	$\frac{1}{10}$

What color will John ***most likely*** select?

A. Blue

B. Red

C. Yellow

D. Green

24. The table below shows the letter grade on a math test and the number of students that earned that grade.

Letter Grade	Number of Students
A	8
B	7
C	6
D	3
F	1

If a student is chosen at random, what is the likelihood that the student earned an

A on the math test?

A. unlikely

B. likely

C. neither likely nor unlikely

25. A box contained 20 pieces of paper labeled 1 through 20. Without looking, Susan reached into the box and pulled out one piece of paper at a time. Susan randomly selected the numbers 1, 16, 18, 20, 13, 9, 10, 15, 8, and 6 from the box and did not put them back in. What is the likelihood Susan will randomly select a prime number on her next try?

A. certain

B. likely

C. unlikely

D. impossible

26. Dylan has 12 purple, 7 orange, 10 yellow, 3 blue, and 6 black marbles in a bag. Without looking, he reaches into the bag and pulls out a marble. What color marble is Dylan least likely to pull out of the bag?

A. purple

B. orange

C. blue

27. Each letter from the word “SCHOOL” is written on a card and placed in a bag. Without looking, a card is pulled from the bag. What is the likelihood that a consonant will be pulled from the bag?

A. certain

B. unlikely

C. likely

28. Jerry conducted a survey to determine the favorite flavor of ice cream in the 7th grade. He surveyed 40 students and found that 1 out of 4 students liked vanilla ice cream the most. If a random 7th grader was chosen from Jerry’s school, what is the likelihood the student would like vanilla ice cream?

A. likely

B. unlikely

C. certain

D. impossible

29. Each of four spinners has one red section, one yellow section, and one blue section. The sections on each of the spinners are different sizes. One of the spinners has the following probabilities for its arrow stopping on the sections:

- red is unlikely
- yellow is more unlikely than red
- blue is likely

Which of the following spinners has the probabilities listed above?

A. Spinner 1 : $p(\text{red}) = 0.4$
$p(\text{yellow}) = 0.5$
$p(\text{blue}) = 0.1$

B. Spinner 2 : $p(\text{red}) = 0.5$
$p(\text{yellow}) = 0.4$
$p(\text{blue}) = 0.1$

C. Spinner 3 : $p(\text{red}) = 0.1$
$p(\text{yellow}) = 0.2$
$p(\text{blue}) = 0.7$

D. Spinner 4 : $p(\text{red}) = 0.2$
$p(\text{yellow}) = 0.1$
$p(\text{blue}) = 0.7$

30. A jar contains pink, white, purple, and yellow jellybeans. The probability of choosing three of the four colors is shown in the table below.

Color of Jelly Bean	Probability of Choosing Color
pink	$\frac{2}{5}$
white	$\frac{1}{8}$
purple	$\frac{3}{8}$

If a student pulls out a jellybean without looking, what is the probability that the jellybean will be yellow?

A. $\frac{1}{4}$

B. $\frac{1}{8}$

C. $\frac{1}{9}$

D. $\frac{1}{10}$

31. A box contains 1 red ball, 3 green balls, and 8 blue balls. What **best** defines the probability associated with picking a red ball without looking?

A. likely

B. certain

C. unlikely

D. impossible

32. In a cookie jar, there are 2 sugar cookies and 10 chocolate chip cookies. If a cookie is selected randomly, how likely is it that it will be a sugar cookie?

A. impossible

B. unlikely

C. likely

D. certain

33. A bag contains 50 pieces of gum flavored cherry, grape, and watermelon.

- William will randomly pick a piece of gum.
- The probability of picking cherry is $\frac{1}{5}$.
- The probability of picking watermelon is $\frac{7}{10}$.

What is the probability William will pick a piece of grape gum?

A. $\frac{1}{10}$

B. $\frac{3}{10}$

C. $\frac{2}{5}$

D. $\frac{4}{5}$

34. Maria is playing a card game. In the deck of cards for the game, 64% of the cards have an even number on them and the rest have an odd number. If Maria picked a card from the deck at random, what is the probability that the card has an odd number on it? State your answer as a percent.

35. Ramon makes a spinner with 4 colors. He colors 25% of the spinner red, 15% blue, 40% orange, and the rest green. Ramon then spun the spinner. Which outcome would be most likely to happen?

A. the spinner landing on green or red

B. the spinner landing on green or blue

C. the spinner landing on orange or red

D. the spinner landing on orange or blue

36. Andrew has white and black socks in a drawer. The probability of him pulling out a black sock is $\frac{1}{5}$. What is the likelihood of Andrew randomly pulling out a white sock?

A. definite

B. likely

C. not likely

D. impossible

37. A bookshelf contains 6 fiction books, 2 non-fiction books, and 1 picture book. A book is chosen at random. What is the likelihood of choosing a fiction book?

A. impossible

B. not very likely

C. likely

D. certain

38. A number cube, labeled 1 through 6, will be rolled one time. What is the likelihood of rolling a 6?

A. impossible

B. unlikely

C. likely

D. certain

39. Mrs. Reed has a bag full of crayons for her classroom. In the bag, there were 10 of each color: blue, yellow, green, brown, red, and black. Students have removed 3 black, 9 blue, 4 brown, 1 green, 5 red, and 8 yellow crayons. What is the likelihood the next crayon randomly selected will be yellow?

A. certain

B. likely

C. unlikely

D. impossible

40. In a bag of 12 marbles, there are 6 blue and 6 red. Paul randomly selects 4 blue marbles and 6 red marbles and does not put them back in the bag. What is the likelihood Paul will select a blue marble on his next try?

A. certain

B. likely

C. unlikely

D. impossible

41. The numbers 4, 64, 22, 7, 34, and 9 are written on pieces of paper and placed in a bag. A piece of paper is chosen randomly out of the bag. How likely is it that the number on the paper will be an even number?

A. impossible

B. unlikely

C. likely

D. certain

42. A box contains red apples and green apples. If an apple is picked at random from the box, the probability of picking a red apple is $\frac{3}{8}$. Which of these best describes the likelihood of picking a green apple?

A. likely event

B. certain event

C. unlikely event

D. neither likely nor unlikely event

43. Which probability indicates a likely event?

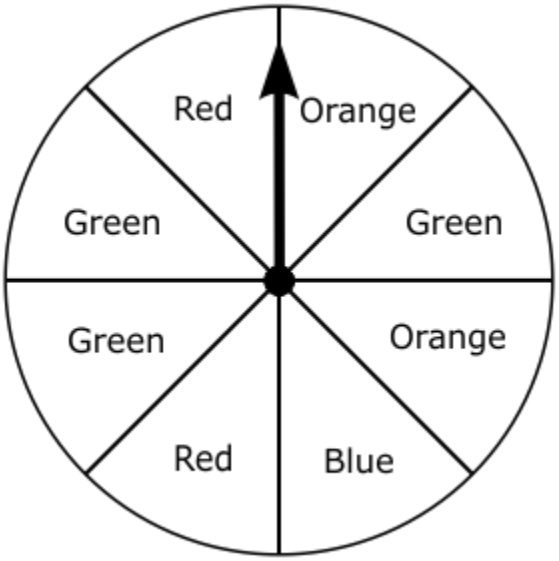
A. $\frac{4}{5}$

B. $\frac{1}{2}$

C. $\frac{2}{5}$

D. $\frac{1}{4}$

44. Tim will spin the spinner below once.



On which color is the spinner ***most likely*** to stop?

A. orange

B. blue

C. red

D. green

45. Mr. Jones sells apples at the farmers' market. In a container, he has 4 different types of apples. The probability of randomly selecting a Golden Delicious apple is $\frac{1}{16}$, a Fuji apple is $\frac{1}{8}$, and a McIntosh apple is $\frac{3}{16}$. The rest of the apples in the container are Galas. What is the likelihood of a customer selecting a Gala apple?

A. impossible

B. unlikely

C. likely

D. certain

46. Natalie has a box of 64 paper clips.

- $\frac{1}{2}$ of the paper clips are red
- $\frac{1}{8}$ of the paper clips are purple
- $\frac{1}{4}$ of the paper clips are green
- $\frac{1}{8}$ of the paper clips are yellow
- Natalie randomly selects two paper clips.

Which color combination is Natalie ***least likely*** to select out of the box?

A. red, then red

B. purple, then yellow

C. green, then purple

D. yellow, then red

47. Monica and Simone are playing a game using a number cube.

- The number cube is numbered 1 through 6.
- Monica needs to roll an odd number to win.

- Simone needs to roll an even number to win.

How likely is Simone's chance of winning compared to Monica's chance of winning?

A. unlikely

B. equally likely

C. more likely

D. certain

48. A meteorologist predicted a 20% chance of rainfall today. Which statement describes the likelihood of rainfall today?

A. Rain is likely to fall today.

B. Rain is unlikely to fall today.

C. Rain is certain to fall today.

D. Rain is certain not to fall today.

49. A jar contains 27 marbles. There are 4 blue marbles and the rest are red. If a marble is chosen at random, what is the likelihood that it will be red?

A. impossible

B. unlikely

C. likely

50. Mr. Williams has only white and blue shirts in his closet.

- Without looking, Mr. Williams pulls a shirt out of his closet.
- The probability of pulling out a blue shirt is $\frac{1}{3}$.

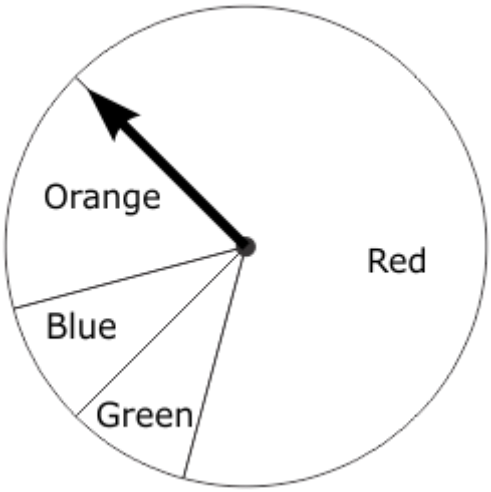
What is the probability that Mr. Williams pulled out a white shirt?

A. $\frac{2}{3}$

B. $\frac{1}{2}$

C. $\frac{1}{3}$

51. A spinner has red, green, blue, and orange sections. The probability of landing on red is $\frac{2}{3}$, on green is $\frac{1}{12}$, on blue is $\frac{1}{12}$.



What is the probability of landing on orange?

A. $\frac{1}{3}$

B. $\frac{1}{4}$

C. $\frac{1}{5}$

D. $\frac{1}{6}$

52. A bag contains 20 pink candies, 8 red candies, and 12 green candies. Without looking, Sarah pulls out a piece of candy. Which color of candy is least likely to be pulled out?

A. pink

B. red

C. green

53. Amanda has a jar full of marbles. The probability of randomly selecting a blue marble is $\frac{1}{18}$, a red marble is $\frac{1}{9}$, a green marble is $\frac{1}{3}$, and a yellow marble is $\frac{1}{2}$. Which marble is Amanda ***least likely*** to randomly select?

A. blue

B. red

C. green

D. yellow

54. Stickers are given to every third student entering the cafeteria. Cookies are given to every fifth student entering the cafeteria. What is the likelihood of receiving both a sticker and a cookie?

A. impossible

B. unlikely

C. likely

D. certain

55. Jasmine tossed a coin in the air. What is the likelihood that the coin will land on tails?

A. neither likely nor unlikely

B. unlikely

C. likely

56. There are apples, bananas, and pears in a basket. The probability of randomly

picking an apple is $\frac{1}{10}$. The probability of randomly picking a banana is $\frac{2}{5}$. What is the probability of randomly picking a pear?

A. $\frac{7}{10}$

B. $\frac{1}{2}$

C. $\frac{2}{5}$

57. Which event is ***most likely*** to occur?

A. rolling a number cube labeled 1 to 6, and landing on a 2 or 4

B. randomly selecting a red marble from a jar containing 10 red and 11 blue marbles

C. randomly selecting a prime number from a hat containing the numbers 1 to 20

D. spinning a spinner with 6 equal sections labeled 1 to 6, and landing on a 1, 2, 3, or 4