









16. Explain how much T.V a person watches a week could be measured as a quantitative variable and as a categorical variable:

Quantitative: Categorical:

17. You have a bag with 10 number tiles in it and the tiles are numbered from 1 – 10. You are going to select a tile and then record the number, then put the tile back in the back and repeat the process. What is the probability that if you select 500 tiles you would get ***more than*** 265 odd numbered tiles?

18. What is the probability of rolling a six-sided die and getting a 4, and then getting a blue marble from a bag that contains 10 red, 7 green, 8 blue and 5 orange marbles?

19. Given you have a bag that contains 100 number tiles numbered 1 – 100:

a. What would be the probability of selecting one number tile that is either even or *greater than* 75 on one pull?

b. Are these two events disjoint? (Explain: Why or Why Not)

20. If you have a drawer with 16 socks in it (10 blue and 6 red), then what would be the probability of selecting two socks at random and getting a matching pair?

21. Insurance company records indicate that 12% of all teenage drivers have been ticketed for speeding and 9% for going through a red light. If 4% have been ticketed for both, what is the probability that a randomly selected teenage driver has been ticketed for speeding but not for running a red light?

1. 3%
2. 8%
3. 12%
4. 13%
5. 17%

22. Sara is taking a test in her science class and her math class, if the class average in science was a 74% and the standard deviation was 10%, compared to an average of 81% and a standard deviation of 4% in her math class. Which tests did she do better on compared to the rest of the class given her score on the science test was a 90% and he math test score was an 88%? (Explain)

23. In the histogram shown below describe the shape, the best measure for center and spread, and then explain how you think the mean compares to the median.



 24. You draw two marbles at random from a jar that has 20 red marbles and 30 black marbles without replacement. What is the probability that both marbles are red?

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| A. | 0.1551 |
| B. | 0.1600 |
| C. | 0.2222 |
| D. | 0.4444 |
| E. | 0.8000 |

25. You have a bag with 10 number tiles in it and the tiles are numbered from 1 – 10. You are going to select a tile and then record the number, then put the tile back in the back and repeat the process.

1. What is the probability that if you select 500 tiles you would get *less than* 220 odd numbered tiles?

26. What is the probability of flipping a coin and getting tails and then getting a blue marble from a bag that contains 4 red, 6 green, 8 blue and 2 orange marbles?

27. If you have a bag that contains 100 number tiles numbered 1 – 100, then what would be the probability of selecting one number tile that is either odd or *greater than* 80 on one pull?

28. Sara is taking a test in her science class and her math class, if the class average in science was a 72% and the standard deviation was 8%, compared to an average of 78% and a standard deviation of 2% in her math class. Which tests did she do better on compared to the rest of the class given her score on the science test was a 90% and he math test score was a 83%? (Explain)

29. Describe two variables that would be considered categorical and two variables that would be considered quantitative.

30. In the histogram shown below describe the shape, the best measure for center and spread, and then explain how you think the mean compares to the median.



 31. You play tennis regularly with a friend, and from past experience, you believe that the outcome of each match is independent. For any given match you have a probability of 0.6 of winning. The probability that you win the next two matches is

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| --- | --- |
| A. | 0.16. |
| B. | 0.36. |
| C. | 0.4. |
| D. | 0.6. |
| E. | 1.2.32. Six Republicans and Four Democrats have applied for two open positions on a planning committee. Since all the applicants are qualified to serve, the City Council decides to pick the two new members randomly. What is the probability that both come from the same party?1. 66/90 B) 42/100 C) 52/100 D) 42/90 E) 52/90

33. At a school there are 100 students in the Senior Class and: 10 Students play Baseball, Basketball and Football 17 Students play Baseball and Football 21 Students play Baseball and Basketball 22 Students play Basketball and Football  31 Students play Baseball 36 Students play Football  40 Students play Basketball* Draw a Venn diagram to represent this scenario, make sure to include students that do not play any sports.
* What is the probability that you randomly select one student and they do not play any of these sports?
* What is the probability of selecting one student at random that plays just Football?
* What is the probability that if you select two students, they both play *exactly* two sports?
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