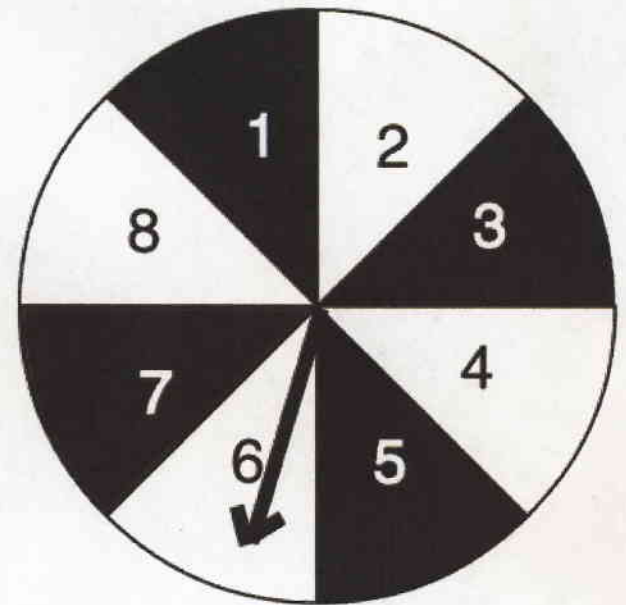


Chuck Learns Chance

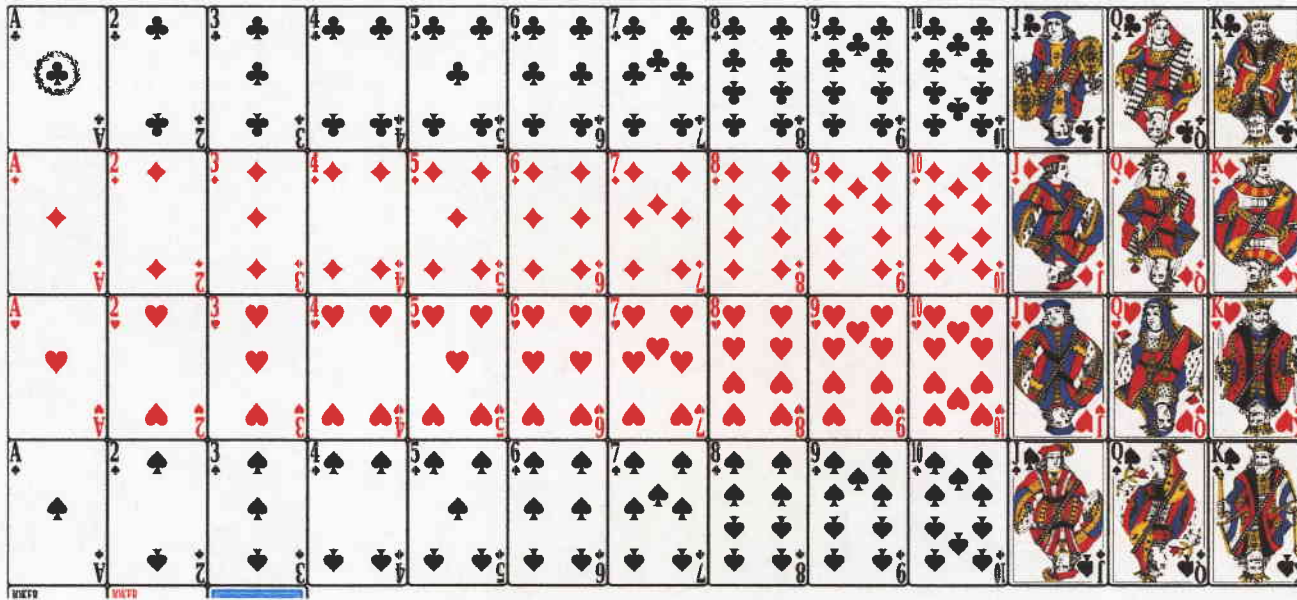


Written by: Ryan Foster

One day, a boy named Chuck was assigned a project on how probability, or chance, comes into real life, so he went out to find as many real-life examples as he could. He was delighted by this idea and was glad to learn more about the subject.



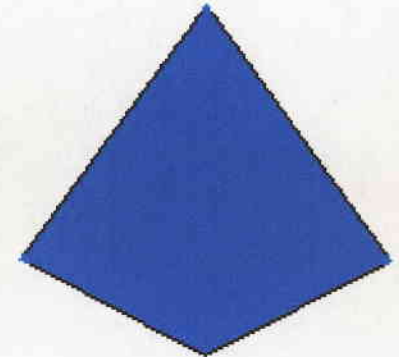
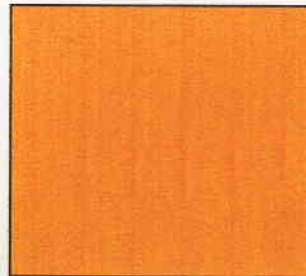
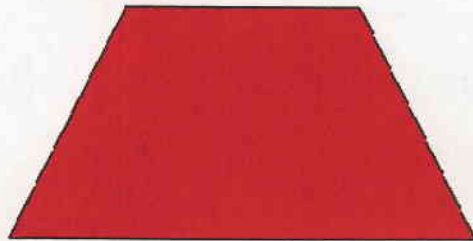
As Chuck began to leave his house to find examples, he came upon two senior citizens playing a simple a game of blackjack and he gave a peek at one man's hand and saw a king card, which is worth 10 in blackjack, and a card worth 5. Chuck wondered if the man would hit, or call for another card, and go over 21. He determined that there are 13 different values. And the ace card, 2, 3, 4, 5, and the 6 cards would not make it go over 21. Therefore, he figured the probability of staying in play was 6/13.



Later, Chuck went to his friend Bill's house, and saw that he had a dog out in his backyard sleeping. Chuck asked Bill how often he sleeps in a day. Bill said that he sleeps about 10 hours everyday. Chuck knows that there is 24 hours in 1 day, so he could figure the probability of the dog being asleep at anytime of the day was $10/24$ or simplified, $5/12$.



When Chuck went to school the next day, he had a quiz on what he had learned so far about probability, so his teacher gave him a bag of polygons, or closed figures with over two sides. He dumped the bag and examined the contents. There were 3 different quadrilaterals, or 4-sided polygons. There was a trapezoid, a quadrilateral with only 1 pair of parallel sides, meaning they never intersect. There was a kite, a quadrilateral in which there are two pairs of sides both touching each other and are congruent, meaning they have equal distance. Last there was a square, a quadrilateral with all sides congruent and all angles were right angles, or angles with a measure of 90 degrees. He was asked to find the probability of picking a regular polygon, a polygon with equal sides and angles, from the bag. He knew the square only worked because it had equal sides and all right angles so they were all equal, making it regular. He figured the probability was $\frac{1}{3}$.



Later that day, Chuck walked around some more looking for more probability situations and he walks a long time looking for something. He can't seem to find anything and he looks down and sees his shoes all dirty from walking around so long. He thinks about cleaning them, but he decides they were kind of worn out anyway so he could go get 2 new pairs of shoes. He has \$130 with him. He went the shoe store and saw 4 pairs in particular that he liked. Pair #1 was \$35, pair #2 was \$60, pair #3 was \$65, and pair #4 was \$95. After listing up all the combinations, he saw there were 10 different combinations. He then looked for the combinations with a sum below or equal to \$130. He could buy pair #1 and pair #2, pair #1 and pair #3, pair #1 and pair #4, and pair #2 and pair #3. So, overall there were 4 combinations of shoes that he could afford. He saw the probability to be $\frac{4}{10}$ or $\frac{2}{5}$.



\$35.00



\$60.00

\$65.00



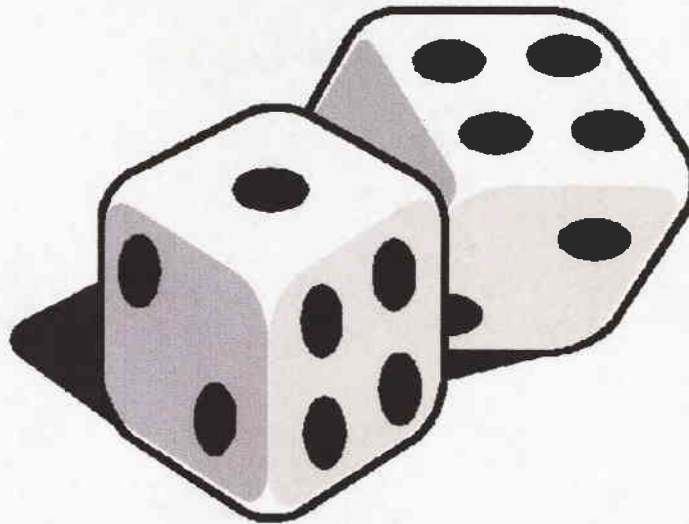
\$95.00



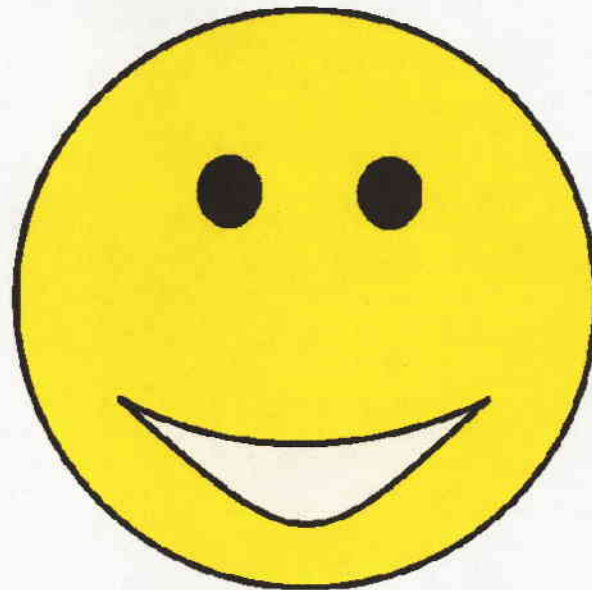
Chuck decided to do a survey of people to find out which type of soda is more commonly bought, he did a survey of people around his town. He asked what people preferred, Coca-Cola or Pepsi. He surveyed about 1000 people and 650 liked Coca-Cola while 350 liked Pepsi. Simplified, about 13 out of every 20 sodas bought is Coke and 7 out of every 20 sodas bought is Pepsi in his town.



Chuck decided to try rolling dice to see probability. He rolled 2 dice with each 1-6. He wanted to figure out the chance of rolling a certain sum. He decided to try out finding the chance of rolling a sum of 10. After counting up all the possibilities, he found there could be 21 different possibilities that could occur. Of all these, 4 and 6, and 5 and 5 are the only 2 combinations that worked. He found the probability to be $\frac{2}{21}$.



After learning from all these experiences he had tested over a couple of days, Chuck finally understood the formula of probability. It is the # of favored possibilities divided by the total # of possibilities. He mastered this formula and was great at doing probability.



The End