

Chapter 13

(Lessons 13-1 and 13-2)

1. A toolbox contains 12 wrenches, 8 screwdrivers, and 5 pairs of pliers. How many ways can a mechanic choose 3 tools, if he needs one of each? 1. _____
 2. How many ways can a mother, father, and six children be arranged in a row for a photograph? 2. _____
 3. How many ways can 3 blue, 4 red, and 2 yellow notebooks be arranged in a row in any variation? 3. _____
 4. For dinner you have chicken, mashed potatoes, and corn. Are eating chicken first and eating mashed potatoes second dependent or independent events? 4. _____
 5. How many ways can 8 pins be arranged on a circular hatband? 5. _____
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Chapter 13,

(Lesson 13-3)

1. What is the probability that a given month of the year begins with the letter *J*? 1. _____
2. Two number cubes are tossed. What are the odds that they show a sum greater than 9? 2. _____
3. From a box containing 12 slips of paper numbered 1 to 12, 2 slips are drawn. Find the probability that the numbers on both slips are divisible by 3. 3. _____
4. The probability of getting a sum of 7 when two number cubes are tossed is 1 in 6. What are the odds of getting a sum of 7 when two number cubes are tossed? 4. _____
5. The odds of a student selected at random being a band member are 3 to 10. What is the probability that a student selected at random is in the band? 5. _____



Practice

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Probabilities of Compound Events

Determine if each event is independent or dependent. Then determine the probability.

1. the probability of drawing a black card from a standard deck of cards, replacing it, then drawing another black card
2. the probability of selecting 1 jazz, 1 country, and 1 rap CD in any order from 3 jazz, 2 country, and 5 rap CDs, replacing the CDs each time
3. the probability that two cards drawn from a deck are both aces

Determine if each event is mutually exclusive or mutually inclusive. Then determine each probability.

4. the probability of rolling a 3 or a 6 on one toss of a number cube
5. the probability of selecting a queen or a red card from a standard deck of cards
6. the probability of selecting at least three white crayons when four crayons are selected from a box containing 7 white crayons and 5 blue crayons
7. **Team Sports** Conrad tried out for both the volleyball team and the football team. The probability of his being selected for the volleyball team is $\frac{4}{5}$, while the probability of his being selected for the football team is $\frac{3}{4}$. The probability of his being selected for both teams is $\frac{7}{10}$. What is the probability that Conrad will be selected for either the volleyball team or the football team?