Compound Probability Worksheet

Grade 7 · Common Core 7.SP.C.8

> Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

Practice

Builds the skill step by step.

1. A coin is flipped and a number cube (1 to 6) is rolled. How many outcomes are in the sample space?

2. A fair coin is flipped twice. What is P(two heads)?

3. Two number cubes are rolled. What is P(a sum of 12)?

4. A café offers 3 sandwiches and 4 drinks. How many sandwich-and-drink combos are possible?

   A. 7

   B. 12

   C. 3

   D. 4

5. A coin is flipped 3 times. How many outcomes are in the sample space?

6. A spinner with 4 equal colors (red, blue, green, yellow) is spun and a coin is flipped. Find P(red and heads).

7. Two number cubes are rolled. Find P(both show 1).

8. Which list is the sample space for flipping two coins?

   A. HH, TT

   B. HH, HT, TT

   C. H, T

   D. HH, HT, TH, TT

9. A fair coin is flipped twice. Find P(exactly one head).

10. An outfit uses 1 of 3 shirts and 1 of 2 pairs of pants. How many outfits are possible?

ALBERT

Name _____ Date _____

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On Level

Grade-level practice.

1. Two number cubes are rolled. Find P(a sum of 7).

2. A fair coin is flipped 3 times. Find P(at least one tail).

3. A bag has 2 red and 3 blue marbles. One is drawn and replaced, then another is drawn. Find P(red, then red).

4. Two number cubes are rolled. Which sum is most likely?

   A. 2

   B. 12

   C. 10

   D. 7

5. A spinner has 3 equal sections numbered 1, 2 and 3. It is spun twice. Find P(a sum of 4).

6. A lunch menu has 2 main dishes, 3 sides and 2 desserts. How many meals with one of each are possible?

7. Two number cubes are rolled. Find P(both numbers are even).

8. A student uses random digits 0 to 9 to simulate a 30% chance of rain. Which digits could stand for rain?

   A. 0, 1 and 2

   B. 0 through 4

   C. Only 3

   D. 0 through 6

9. A code is one letter (A, B or C) followed by one digit (0 to 9). How many codes are possible?

10. A coin is flipped and a number cube is rolled. Find P(tails and a number greater than 4).

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Challenge

Multi-step and word problems that stretch it.

1. Two number cubes are rolled. Find P(a sum greater than 9).

2. A family has 3 children. Boys and girls are equally likely. Find P(exactly 2 girls).

3. A bag has 4 green and 6 yellow marbles. Two are drawn with replacement. Find P(one of each color).

4. A player makes 80% of her free throws. To simulate two shots, the digits 0 to 7 stand for a make and 8 and 9 for a miss. Which pair of random digits shows two makes?

   A. 8 and 2

   B. 9 and 9

   C. 5 and 8

   D. 3 and 7

5. A lock uses a 4-digit code with digits 0 to 9, and digits can repeat. How many codes are possible?

6. Two spinners each have 4 equal sections numbered 1 to 4. Both are spun. Find P(the product is even).

7. A fair coin is flipped 4 times. Find P(all heads or all tails).

8. A pizza shop offers 3 crusts, 2 sauces and 5 toppings. Choosing one of each, how many pizzas are possible?

   A. 30

   B. 10

   C. 15

   D. 60

9. A simulation of 50 families with two children found 14 families with two girls. What is the experimental probability, and what is the theoretical probability?

10. Two number cubes are rolled. Find P(the two numbers are different).