

Practice 9-2

Experimental Probability

Suppose you observe the color of socks worn by students in your class: 12 have white, 4 have black, 3 have blue, and 1 has red. Find each experimental probability as a fraction in simplest form.

1. $P(\text{white})$ _____
2. $P(\text{red})$ _____
3. $P(\text{blue})$ _____
4. $P(\text{black})$ _____
5. $P(\text{yellow})$ _____
6. $P(\text{black or red})$ _____

Use the data in the table at the right for Exercises 7–12.

Find each experimental probability as a percent.

7. $P(\text{fruit})$ _____
8. $P(\text{granola})$ _____
9. $P(\text{pretzels})$ _____
10. $P(\text{carrots})$ _____
11. $P(\text{not fruit})$ _____
12. $P(\text{granola or chips})$ _____

13. Do an experiment to find the probability that a word chosen randomly in a book is the word *the*. How many words did you look at to find $P(\text{the})$? What is $P(\text{the})$?
- _____

**Favorite Snack
Survey Results**

Snack	Number of Students
Fruit	8
Granola	2
Pretzels	3
Chips	7
Carrots	5

14. Suppose the following is the result of tossing a coin 5 times:

heads, tails, heads, tails, heads

What is the experimental probability for heads?

Solve.

15. The probability that a twelve-year-old has a brother or sister is 25%. Suppose you survey 300 twelve-year-olds. About how many do you think will have a brother or sister?
- _____

16. a. A quality control inspector found flaws in 13 out of 150 sweaters. Find the probability that a sweater has a flaw. Round to the nearest tenth of a percent.
- _____

- b. Suppose the company produces 500 sweaters a day. How many will not have flaws?
- _____

- c. Suppose the company produces 600 sweaters a day. How many will have flaws?
- _____