

Key

Practice 12-7 Experimental Probability

The table shows the colors of Rahmi's soccer shirts. For each color, find the experimental probability that a random shirt from Rahmi's collection is that color. Write the probability as a percent, to the nearest tenth of a percent.

Color	Number of shirts
red	6
white	4
orange	3
blue	2

Practice

1. red 40%
2. white 26.7%
3. orange 20%
4. blue 13.3%
5. red or blue 53.3%
6. not white 73.3%
7. not orange or red 40%
8. green 0%

Your school's basketball team has an equal chance of winning or losing the first three games of the season. You simulate the probability by tossing a coin 60 times, letting heads stand for a win and tails stand for a loss. Use the data below. Find each experimental probability as a percent.

HHH THH THT TTH THH
 HTH THH THH HTH HHH
 THH TTH THH HTT TTT
 HTT HHT TTH HTH THH

9. $P(\text{win all 3}) = \frac{2}{20} = \frac{1}{10} = 10\%$
10. $P(\text{win exactly 2}) = \frac{11}{20} = 55\%$
11. $P(\text{win exactly 1}) = \frac{6}{20} = \frac{3}{10} = 30\%$
12. $P(\text{win none}) = \frac{1}{20} = 5\%$
13. $P(\text{win at least 2}) = \frac{13}{20} = 65\%$
14. $P(\text{win at least 1}) = \frac{19}{20} = 95\%$
15. $P(\text{win less than 2}) = \frac{7}{20} = 35\%$

Students were surveyed about the number of children living in their household. The table shows the results. Write each experimental probability as a fraction in simplest form.

Number of children	Number of students
0	0
1	11
2	15
3	3
4 or more	4

16. $P(\text{one child}) = \frac{11}{33} = \frac{1}{3}$
17. $P(\text{2 or more children}) = \frac{22}{33} = \frac{2}{3}$
18. $P(\text{at least 3 children}) = \frac{7}{33}$