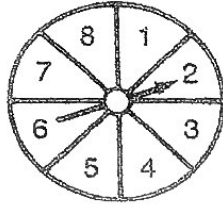


Probability

The probability of an event (E) is the quotient of the number of **favorable outcomes** (f) divided by the number of **possible outcomes** (n). What is the probability of spinning an even number?

$$P(E) = \frac{f}{n}$$

$$P(\text{even}) = \frac{4}{8} = \frac{1}{2}$$



Practice • Find each probability. Use the spinner above.

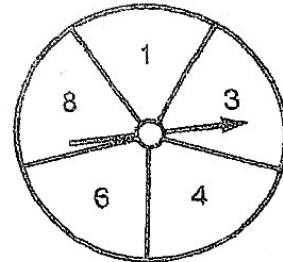
1. $P(2)$ _____ 2. $P(5)$ _____ 3. $P(\text{odd})$ _____ 4. $P(\text{less than } 6)$ _____
5. $P(6)$ _____ 6. $P(\text{not } 6)$ _____ 7. $P(19)$ _____ 8. $P(\text{not } 19)$ _____

There are 4 yellow, 2 red, 3 blue, and 1 black marble in a jar. You pick a marble from the jar without looking. Find each probability. Assume that the marble is replaced before the next pick.

9. $P(\text{yellow})$ _____ 10. $P(\text{red})$ _____ 11. $P(\text{blue})$ _____
12. $P(\text{black})$ _____ 13. $P(\text{not red})$ _____ 14. $P(\text{not yellow})$ _____
15. $P(\text{not white})$ _____ 16. $P(\text{purple})$ _____ 17. $P(\text{not black})$ _____
18. $P(\text{not purple})$ _____ 19. $P(\text{white})$ _____ 20. $P(\text{not white})$ _____

Use this spinner once. Find each probability.

21. $P(3)$ _____ 22. $P(\text{not } 3)$ _____
23. $P(\text{odd})$ _____ 24. $P(\text{not odd})$ _____

**Problem Solving** • Applications

25. You have 15 marbles in your pocket. 5 are blue, 6 are red, and 4 are green. You reach into your pocket. What is the probability that the marble will be red?

26. You have 9 sweaters in your closet. 2 of them are blue. You choose one without looking. What is the probability that the sweater will be blue?
