

Give all answers as reduced fractions.

Find the probability of each outcome if a die is rolled.

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|-------------------------------|-------------|----------------------------|-------------|
| 1. a 1 | $1/6$ | 4. a number less than 3 | $2/6 = 1/3$ |
| 2. an odd number | $3/6 = 1/2$ | 5. a number greater than 6 | 0 |
| 3. an even number less than 6 | $2/6 = 1/3$ | 6. a number greater than 0 | 1 |

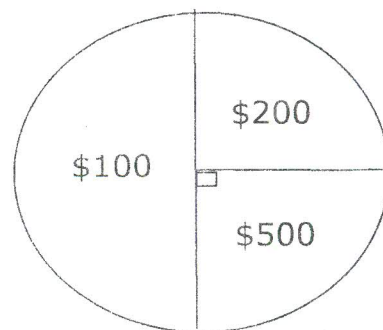
A **standard deck of 52 cards** has 4 suits (hearts and diamonds are red; clubs and spades are black). Each suit has 13 cards: Ace, 2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen, King. The Jack, Queen, and King are called "face cards."

A card is selected at random from a standard deck of 52 cards. What is the probability of selecting:

- | | | | |
|----------------|---------------|--------------------|--------|
| 7. a red card. | $26/52 = 1/2$ | 10. not a diamond. | $3/4$ |
| 8. an ace. | $4/52 = 1/13$ | 11. an even club. | $5/52$ |
| 9. a red jack. | $2/52 = 1/26$ | | |

Using the spinner at the right. Find the probability of spinning:

- | | |
|---------------------|-------|
| 12. \$100 | $1/2$ |
| 13. \$200 | $1/4$ |
| 14. less than \$300 | $3/4$ |
| 15. more than \$500 | 0 |
| 16. more than \$100 | $1/2$ |



Given a bag of 3 red marbles, 5 blue marbles and 4 green marbles. What is the probability of selecting:

17. a green marble $\frac{4}{12} = \frac{1}{3}$

19. a blue or a red marble $\frac{8}{12} = \frac{2}{3}$

18. not a blue marble $\frac{7}{12}$

20. a blue, red or green marble 1

21. In a survey of 3630 college students, 1162 stated that they cheated on an exam. If one of these college students is randomly selected, find the probability that he or she cheated on an exam.

$$\frac{1162}{3630} = \frac{581}{1815}$$

22. A Bureau of the Census survey of 600 persons in the 18-25 age bracket found that 237 of them smoke. If a person in that age bracket is randomly selected, find the approximate probability that he or she does not smoke.

$$\begin{array}{r} 600 \\ - 237 \\ \hline 363 \end{array}$$

$$\frac{363}{600} = \frac{121}{200}$$

The number of male and female doctors in Camron are listed by age in the table at the right. Use the data to answer the following questions.

23. How many doctors are in Cameron?

$$132$$

Camron Doctors		
Age	Male	Female
Under 35	29	18
35-44	36	8
45-54	19	3
55-64	17	2

24. What is the probability that a doctor Chosen is a male under 35?

$$\frac{29}{132}$$

25. What is the probability that a doctor Chosen is a male?

$$\frac{101}{132}$$

$$101 + 31 = 132$$

26. What is the probability that the doctor chosen is under 45?

$$\begin{array}{r} 26 \\ + 65 \\ \hline 91 \end{array}$$

$$\frac{91}{132}$$

27. What is the probability that the doctor chosen is at least 45?

$$36 + 5 = 41$$

$$\frac{41}{132}$$