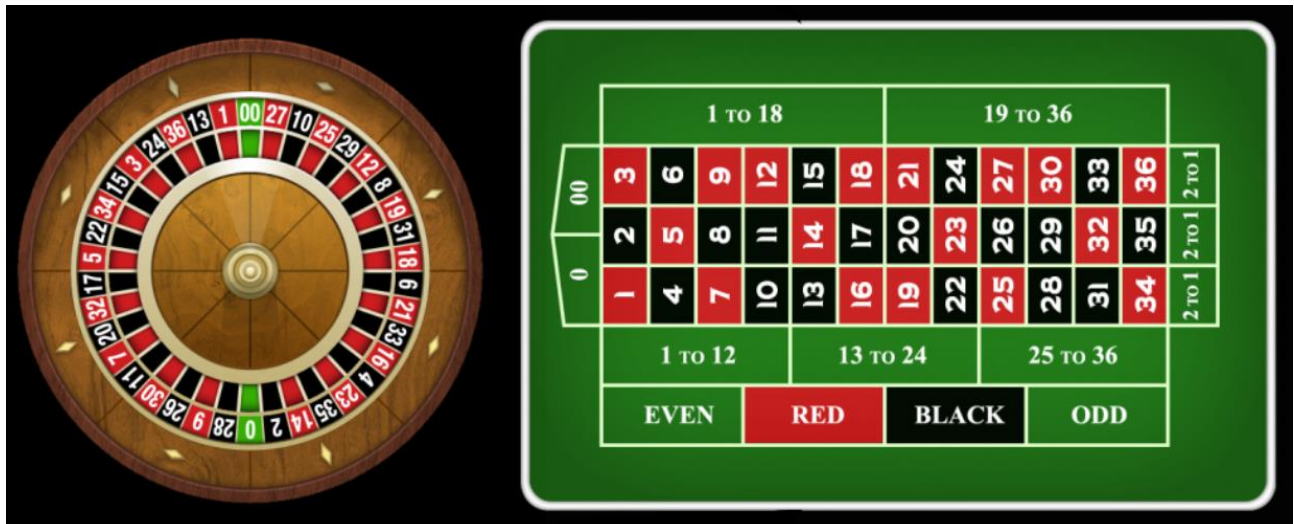
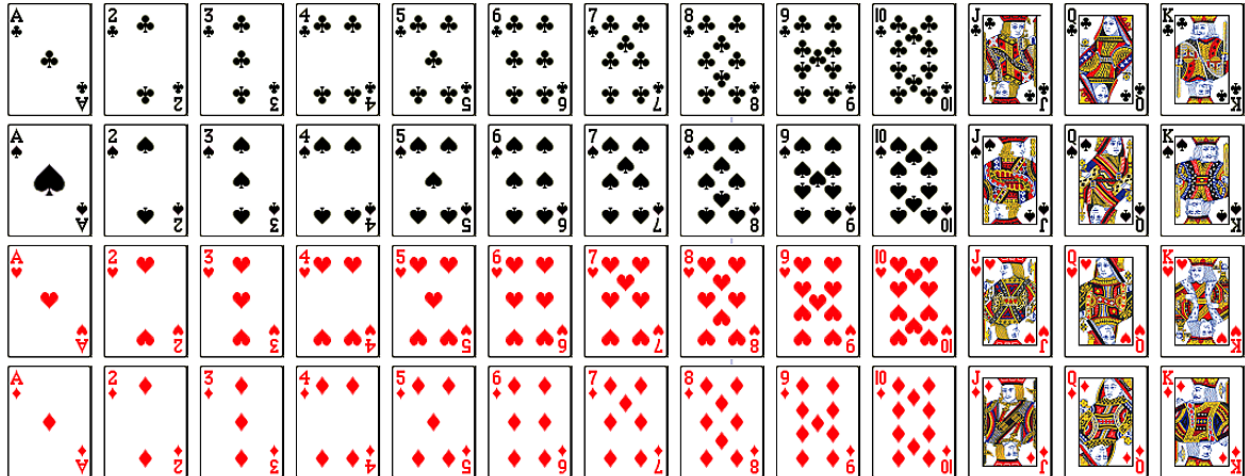


# Probability: Playing Cards and Roulette

## Objectives:

- Calculating the probability
- Understanding events

## Events:



## Exercises:

- Using a standard deck of cards (as seen above) and picking a card for each event. Consider Aces are the highest cards.
  - Picking a King
  - Picking a King and a Heart
  - Picking a card that is less than 6

- d. Picking a card that is at least 9
  - e. Picking a Queen or a Diamond
  - f. Picking a card that is no more than 3
  - g. Picking a Club or a Heart
  - h. Picking a 5 and a Queen
  - i. Does not pick a Diamond
2. Using our American Roulette wheel (as seen above) find the probability for each event. Don not count 0 and 00 as low.
- a. The ball lands on the number 27
  - b. The ball lands on a number that is at least 34
  - c. The ball lands on a green space
  - d. The ball lands on an even number
  - e. The ball lands on a number that is at most 4
  - f. The ball lands on a green or a red space
  - g. The ball lands on the number 38
  - h. The ball does not land on a green space.

**Answers:**

1a.  $\frac{1}{13}$

1b.  $\frac{1}{52}$

1c.  $\frac{4}{13}$

1d.  $\frac{6}{13}$

1e.  $\frac{4}{13}$

1f.  $\frac{2}{13}$

1g.  $\frac{1}{2}$

1h. 0

1i.  $\frac{3}{4}$

2a.  $\frac{1}{38}$

2b.  $\frac{3}{38}$

2c.  $\frac{1}{19}$

2d.  $\frac{9}{19}$

2e.  $\frac{2}{19}$

2f.  $\frac{10}{19}$

2g. 0

2h.  $\frac{18}{19}$