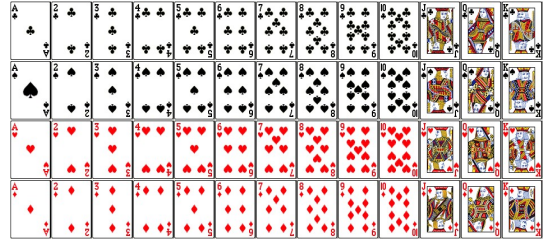


Basic Probability #8

1. A deck of cards has 52 cards in four suits – clubs, spades, hearts, diamonds – from ace (1) to king:

If I shuffle a deck and draw a card at random, what is the probability I get:

- the two of hearts?
- a King?
- a three, four or five?



2. For the spinner to the right, what is the probability that:

- a single spin gives a six?
- a single spin doesn't give a one?
- two spins both give a five?



3. The favourite ice-cream flavour is shown for some boys:

	Chocolate	Strawberry	Vanilla	Other
Number	12	7	4	10

What is the probability a random boy:

- prefers chocolate ice-cream?
- whose favourite is strawberry if we know it isn't chocolate?

4. The colour and operating system of a class's phones is shown:

	Black	White	Other Colour	Total
iOS	2	3	0	
Android	10	1	5	
Total				

What is the probability a random phone from the class:

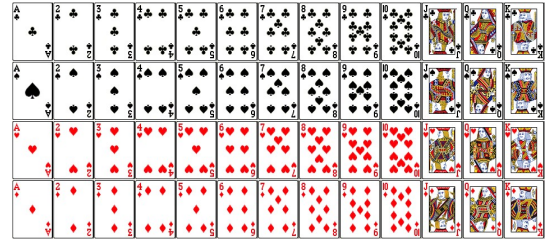
- is Android OS?
- is black?
- is Android, if it is black?

5. NZ number plates are three letters then three numbers. What is the probability that the next two plates you see end in the same two digits? (Ignore personalised plates)



Answers : Basic Probability #8

1. A deck of cards has 52 cards in four suits – clubs, spades, hearts, diamonds – from ace (1) to king:



If I shuffle a deck and draw a card at random, what is the probability I get:

- a) the two of hearts? $\frac{1}{52}$
 b) a King? $\frac{4}{52}$ or $\frac{1}{13}$
 c) a three, four or five? $\frac{12}{52}$ or $\frac{3}{13}$

2. For the spinner to the right, what is the probability that:

- a) a single spin gives a six? $\frac{1}{6}$ (or 16.67%)
 b) a single spin doesn't give a one? $\frac{5}{6}$ (or 83.33%)
 c) two spins both give a five? $\frac{1}{6} \times \frac{1}{6} = \frac{1}{36}$ (or 2.78%)



(one event then another is always a multiplication)

3. The favourite ice-cream flavour is shown for some boys:

	Chocolate	Strawberry	Vanilla	Other
Number	12	7	4	10

What is the probability a random boy: **Total is 33**

- a) prefers chocolate ice-cream? $\frac{12}{33}$ (or 36.36%)
 b) whose favourite is strawberry if we know it isn't chocolate? $\frac{7}{21}$ or $\frac{1}{3}$ (or 33.33%)
 because we ignore the 12 who prefer chocolate.

4. The colour and operating system of a class's phones is shown:

	Black	White	Other Colour	Total
iOS	2	3	0	5
Android	10	1	5	16
Total	12	4	5	21

What is the probability a random phone from the class:

- a) is Android OS? $\frac{16}{21}$ (or 76.19%)
 b) is black? $\frac{12}{21}$ (or 57.14%)
 c) is Android, if it is black? $\frac{10}{12}$ or $\frac{5}{6}$ (because we ignore the 9 other colours)

5. What is the probability that the next two plates you see end in the same two digits? (Ignore personalised plates)



$\frac{1}{100}$ or 1% (The first one will have two digits. Whatever they are, there is 1 in a 100 chance the next will be the same as the first ones)