PROBABILITY
COMPLEMENTARY EVENT

In probability, **COMPLEMENTARY EVENTS** are events that together make up all the possible outcomes.

The complement of an event E, are all those outcomes that are *not* E, or that are the 'opposite of E

REMEMBER!!
An event and its complement cover all possible outcomes.

THE SUM OF THEIR PROBABILITIES MUST BE EQUAL 1

Example:
A pack of 20 cards contains 10 red, 6 yellow and 4 green cards. One card is drawn from the pack at random. Find the probability that this card is:

a) Yellow

Answer: P(Yellow) $= \frac{6}{20} = \frac{3}{10}$ (simplify your answer)

b) **NOT** Yellow

Answer: P(Not Yellow) $= 1 - \frac{3}{10} = \frac{7}{10}$

A. Answer all questions below.

(Give your answer in **fraction** and **simplify** to the lowest term if necessary)

1) If the probability of an event is $\frac{3}{8}$. What is the probability of its complement?	Answer = —
2) The probability that Scott will win his next darts match is $\frac{2}{5}$. What is the probability that he will **NOT** win?	Answer = —
3) The probability that Reza is late for school is $\frac{4}{10}$. What is the probability that he will **NOT** late?	Answer = — = —
4) A single 6-sided dice is rolled. What is the probability of rolling a number that is **NOT** 4? 	Answer = —
5) A glass jar contains 20 red marbles. If a marble is chosen at random from the jar, what is the probability that it is **NOT** red? 	Answer = — = 0

B. Read each question below. Select your answer by clicking on the box.

	Answer	
1) A glass jar contains 5 red, 3 blue and 2 green jelly beans. If a jelly bean is chosen at random from the jar, what is the probability that it is **NOT** blue?	$\frac{1}{2}$	$\frac{3}{10}$
	$\frac{7}{10}$	None of the mentioned
2) A student is chosen at random from a class of 16 girls and 14 boys. What is the probability that the student chosen is **NOT** a girl?	$\frac{8}{15}$	$\frac{7}{15}$
	1	None of the mentioned
3) A number from 1 to 5 is chosen at random. What is the probability that the number chosen is **NOT** odd?	$\frac{2}{5}$	$\frac{3}{5}$
	0	None of the mentioned
4) If a number is chosen at random from the following list, what is the probability that it is **NOT** prime? 2, 3, 5, 7, 11, 13, 17, 19	1	$\frac{1}{8}$
	0	None of the mentioned
5) If a single 6-sided dice is rolled, what is the probability of rolling a number that is **NOT** 8?	$\frac{5}{6}$	1
	0	None of the mentioned