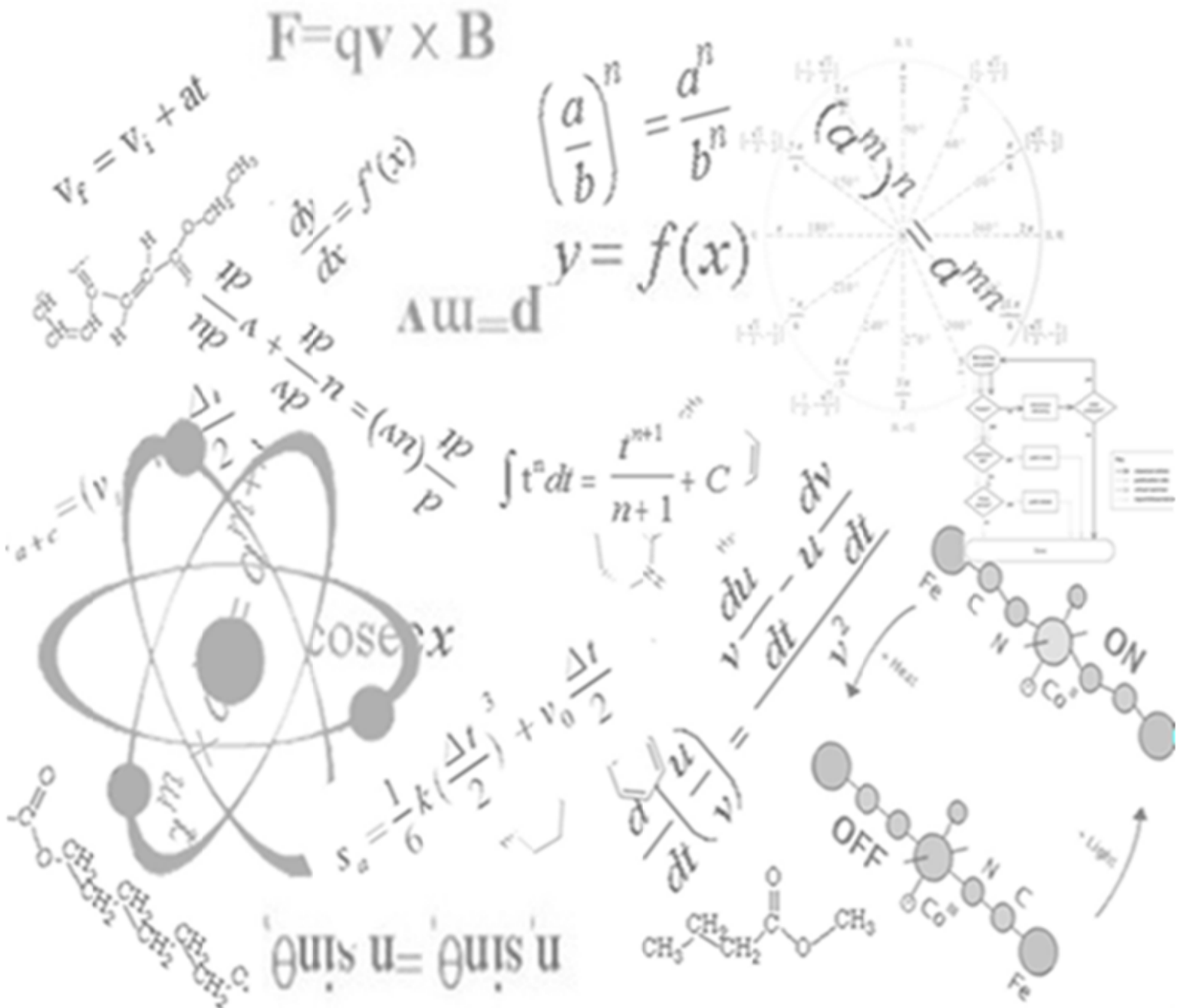


where students come first!



## Year 11- Mathematics Advanced

### Probability



# Probability Exam

/22

**1. (3 marks)**

6 blue and 5 red lollies are placed in a bag and 10 blue and 8 red lollies are placed in a second bag. If a lollie is drawn from each bag, what is the probability of a blue and a yellow lollie being drawn?

**2. (2 marks)**

A fair dice is rolled twice. Find the probability that the total of the two scores is 7 or 11.

**3. (2 marks)**

A fair die is rolled 3 times. Find the probability that no sixes occur and find the probability that at least 1 six occurs.

**4. (2 marks)**

A family has four children, find the probability that the family has no boys and the probability that the family has at most 3 girls.

**5. (2 marks)**

two students, A and B, sit a test. their probabilities of passing are 0.8 and 0.6, find the probability that exactly one of them passes.

**6. (2 marks)**

50 tickets are sold in a raffle which there are three prizes. a person holds 5 tickets, find the probability that he wins all three prizes.

**7. (3 marks)**

In town A, 60% of the people are in favour of liberals and in town B 80% are in favour of the liberals. A town is chosen at random and then a person is chosen at random from that town. Find the probability that the person is in favour of the liberals.

using a tree diagram:

**8. (2 marks)**

To arrive to work on time a worker needs 2 certain traffic lights to be green. the first set is green with a probability of  $\frac{1}{2}$  and the second  $\frac{2}{3}$ . Find the probability that the worker is late on any day.

**9. (3 marks)**

Girgis has a container containing 5 blue discs, 4 red discs and 3 black discs. if he selects 2 discs at random, find the probability that:

- i) they are both the same colour
- ii) only one of them is blue

**10. (1 marks)**

there are 5 true/false questions in a test in which the student guesses each question. Find the probability that exactly two are correct.