

**Subject 37**  
**Probability**

**Please, don't write on the exam paper.**

**Exercise 1**

In a box, there are 10 black balls and 8 red balls.  
We draw one ball at random and we replace it in the box.  
Then we draw a second ball.

Calculate the probability that:

- 1) The two balls drawn are red.
- 2) One of them is black and the other is red.

**Exercise 2**

Two balls are drawn successively from a box containing 4 black and 5 white balls.  
Find the probability that both balls are black, if the first ball is not replaced before the second is drawn.

**Exercise 3**

- 1) In a class of 24 students, there are 14 girls. 4 boys of this class have blue eyes.  
One student of this class is chosen at random.  
What is the probability that the student has blue eyes given that it's a boy?
- 2) Hospital records show that of patients suffering from a certain disease, 25% die of it.  
What is the probability that among 6 randomly selected patients, 4 will recover?  
(Round to 2 decimal places)