ثانوية رفيق الحريري
Rafic Hariri High School

Scholastic Year: 2017 - 2018
Class: SE1 → SE2 (Scientific)
Make-Up exam

Math

Subject: Concepts required for the Math Make-Up Exam

1. **Trigonometric Lines.**(Relation between degree and radian – length of an arc of a circle – Orientation of a circle – trigonometric circle - measure of an oriented arcs – principal determination of an arc – usage of the calculator – trigonometric lines in a right triangle and on a trigonometric circle – sign of trigonometric lines – remarkable arcs– associated arcs)

2. **Vectors.**(Sum of vectors - Multiplication of a vector by a real number – collinear vectors – collinear points)

3. **Coordinate systems.**(Types of systems – coordinates of a point – coordinates of a vector – coordinates of midpoint and centroid – analytic expression of vector equality – translation of a system)

4. **Scalar Product .**(analytic form and geometric form of scalar product)

5. **Straight lines in a plane .**(Direction vector and vector of a straight line – parametric representation of a straight line – Cartesian Equation of a straight line – condition of parallelism of two straight lines – graph of a straight line –relative position of two straight lines)

6. **First Degree Equations in one unknown.**
(solving equations with absolute value – solving problems using first degree equations)

7. **Linear Inequalities in one unknown**
(solving inequalities and systems of inequalities in one unknown – solving problems using first degree inequalities)

8. **Study of functions .**

(Domain of definition – representative curve– parity of a function – sense of variation of a function – Extremum of a function – graphical reading and table of variations of a function – draw the representative curve of a function – graphical solution of an equation and an inequality – graphical comparison of two functions on an interval).

9. **Polynomials.**(null polynomial – equal polynomials – identical polynomials – reduce and order a polynomial Operations on polynomials – Factorization of a polynomial – Euclidean division).

10. **Space geometry:** (*Principle rules of the cavalier's perspective, the cube and other solids, basic rules, determination of a plane, relative positions of a line and a plane, relative positions of 2 lines in space).*