**USKUDAR UNIVERSITY**

**FACULTY OF ENGINEERING AND NATURAL SCIENCES**

**DEPARTMENT OF MOLECULAR BIOLOGY AND GENETIC**

**MBG 108 - INTRODUCTION TO PROGRAMMING**

**MAKE UP**

1. [30 Points] Write MATLAB codes to plot the 𝑓(𝑡)= 3𝑡2 +2𝑡−0.5 and g(t)=2\*t\*cos(t) where the variable t changes from 0 to 10 with step 0.5. Plot two lines on the same figure. Add a label on the x-axis, a label on the y-axis, a title, and a grid. Also change the color of the lines. (Hint: you can calculate power operation by ^, and do element wise operation). You should obtain a figure like in the following;



1. [30 Points] Write a MATLAB code to create a variable that store a number and ask the user to enter a number, then check the number is less than, greater than or equal to your number. According to the condition, display a message on screen (like in example below) (Hint: use if elseif statement)

**Sample screen (red ones entered by the user)**

Enter number: 34

Your number is bigger than my number

1. [40 Points] Write a MATLAB code to ask the user to enter a number for the angle, a number to choose the trigonometric functions Sin, Cos and Tangent. According to the user selection, calculate the result of function and display on screen (Hint: Use switch statement).

**Sample screen (red ones entered by the user)**

Enter angle in degrees: 60

Enter a number to choose function (1: Sin, 2: Cos, 3: tangent): 2

0.5000