

Name-Surname:

ID:

Gr:

Sign:

❶ Type a matlab code to calculate elementary product of 2. and 5. columns of a matrix (20p).

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❷ Write a script file to generate up sequence by using while loop (40p).

$$x(k+1) = x(k)/2 \quad \text{if } x(k) \text{ is even}$$

 $x(k+1)$ 

$$= 3*x(k)+1 \quad \text{if } x(k) \text{ is odd}$$

❸ Create a user defined function named “drop.m” which computes a falling objects velocity and distance. The velocity and distance of a falling object is given by

$$v = v_0 + gt$$

$$d = \frac{1}{2}gt^2 + v_0t$$

Here, v and d are the final velocity and distance of a falling object after time t respectively.  $v_0$  is the initial velocity of the object and g is the acceleration of gravity (9.81). Test your program appropriate input and output arguments (40p).