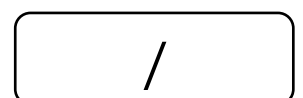


Q1. (6 Marks, 1 each) Tick Valid (✓) or Not Valid (✗) in front of the following MATLAB commands:

- `A = [2 6]; B = [4;8]; A*B` (✓)
- `n = [1,2,3 ; 4,5,6]; m = [2,2,2]; k = [m n']` (✗)
- `G = @(a,b) a^2 + b^2; G([2 4])` (✗)
- `a = 12; b = 3; rem(a,b)` (✓)
- `t = 0:10*pi; subplot(1,2,1), plot(t, sin(t))` (✓)
- `x = 0:10*pi; scatter(x, sin(x))` (✓)

Q2. (5 Marks, 1 each) Evaluate the following MATLAB codes:

MATLAB Expression	Evaluation Result
<code>>> linspace(10,5,2)</code>	ans = 10 1
<code>>> a = [1 2 3 4] ;</code> <code>>> a(2,1:4) = 3</code>	a = 1 2 3 4 3 3 3 3
<code>>> t = rand;</code> <code>>> floor(t)</code>	ans = 0
<code>>> a = [1 2 3 4] ;</code> <code>>> max(4*a) + min(a)</code>	ans = 17
<code>>> t = rand(3,2);</code> <code>>> length(t)</code>	ans = 3



Q3. (5 Marks, 1 each) Write the following Mathematical Expressions into MATLAB Expressions

Mathematical Expression	MATLAB Expression
$x = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \end{bmatrix}$	<code>x = ones(2,3)</code>
$y = \begin{bmatrix} 8 & 1 & 6 \\ 3 & 5 & 7 \\ 4 & 9 & 2 \end{bmatrix}$	<code>y = magic(3)</code>
$\ln 3t^2$	<code>syms t log(3*t^2)</code>
$\sin^2\left(\frac{x}{\pi}\right)$	<code>syms x n sin(x/n)^2</code>
$\int_{-\pi}^{\pi} x \sin(2\pi x) dx$	<code>syms x int(x * sin(2*pi*x) , x)</code>

Q4. (4 Marks) Rewrite the following MATLAB script using a single **switch** statement:

<pre>clear; clc; n = input('Enter a number : '); if n < 0 disp(' Negative ') elseif n > 0 disp(' Positive ') elseif n == 0 disp(' Zero ') end</pre>	<pre>clear; clc; n = input('Enter a number : '); switch 1 case n < 0 disp(' Negative ') case n > 0 disp(' Positive ') case n == 0 disp(' Zero ') end</pre>
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Best of luck

