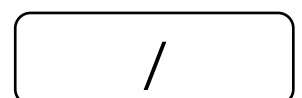


Q1. (6 Marks, 1 each) Tick Valid (✓) or Not Valid (✗) in front of the following MATLAB commands:

- `A = [2 6]; B = [4 ; 8]; A*B` (✓)
- `syms x y; M = [x y^3 x*y x+y]` (✓)
- `G = @(a,b) a^2 + b^2; G([2 4],[1 3])` (✗)
- `a = 12; b = 3; rem(a/b)` (✗)
- `t = 0:10*pi; subplot(2,2,5); plot(t, sin(t))` (✗)
- `x = 0:10*pi; stem(x, sin(x))` (✓)

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

MATLAB Expression	Evaluation Result
<pre>>> x = [2 4 ; 6 8]; >> x(3)</pre>	<pre>ans = 4</pre>
<pre>>> a = [1 2 3 4] ; >> a(3,1:4) = 2</pre>	<pre>a = 1 2 3 4 0 0 0 0 2 2 2 2</pre>
<pre>>> t = rand; >> ceil(t)</pre>	<pre>ans = 1</pre>
<pre>>> a = [1 2 3 4] ; >> max(a) + min(4*a)</pre>	<pre>ans = 8</pre>
<pre>>> t = rand(3,4); >> size(t)</pre>	<pre>ans = 3 4</pre>



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

Mathematical Expression	MATLAB Expression
$x = \begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$	<code>x = zeros(2,3)</code>
$y = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	<code>y = eye(3)</code>
$\log 3x^2$	<code>syms x log10(3*x^2)</code>
$\frac{d}{dx} x \sin(2\pi x)$	<code>syms x diff(x * sin(2*pi*x), x)</code>
$\int_{-\pi}^{\pi} x \cos\left(x + \frac{\pi}{2}\right) dx$	<code>ans = -2*pi</code>

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

<pre>Clear; clc n = input('Enter a number: '); f = 1; while n > 1 f = f*n; n = n-1; end disp(f)</pre>	<pre>clear; clc n = input('Enter a number: '); f = 1; for x = 1:n f = f * x; end disp(f)</pre>
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Best of luck

