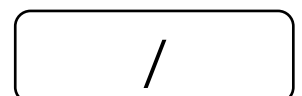


**Q1. (6 Marks, 1 each)** Tick Valid (✓) or Not Valid (✗) in front of the following MATLAB commands:

- `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(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
<code>&gt;&gt; linspace(10,1,2)</code>	ans = 10      1
<code>&gt;&gt; a = [ 1 2 3 4 ] ;</code> <code>&gt;&gt; a(3,1:4) = 2</code>	a = 1      2      3      4 0      0      0      0 2      2      2      2
<code>&gt;&gt; t = rand;</code> <code>&gt;&gt; ceil(t)</code>	ans = 1
<code>&gt;&gt; a = [1 2 3 4 ] ;</code> <code>&gt;&gt; max(a) + min(4*a)</code>	ans = 8
<code>&gt;&gt; t = rand(2,3);</code> <code>&gt;&gt; size(t)</code>	ans = 2      3



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>
$\cos^{-1}(\pi x)$	<code>syms x acos(pi*x)</code>
$\frac{d}{dx} x \sin(2\pi x)$	<code>syms x diff(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 &lt; 0     disp(' Negative ') elseif n &gt; 0     disp(' Positive ') elseif n == 0     disp(' Zero ') end</pre>	<pre>clear; clc; n = input('Enter a number : '); switch 1     case n &lt; 0         disp(' Negative ')     case n &gt; 0         disp(' Positive ')     case n == 0         disp(' Zero ') end</pre>
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*Best of luck*

