

Part 1: Digital Image Review

- 1 When a digital image is stored in a matrix, which element do we consider to be the “origin”? _____

(2-4) Consider the following matrix.

1	6	2	0	-3
-1	4	2	1	4

- 2 What are the dimensions of the matrix? _____
- 3 What is the value at position (2, 1)? _____
- 4 What is the location of the element with a value of -3? _____
- 5 When using the color intensity scale ranging from 0 to 255, what numerical value represents “black”? _____
- 6 In the R-G-B color scheme, what is the result of combining the full intensity of all three color channels? _____

Part 2: Octave Review

- 7 Octave is a clone of what industrial mathematical program? _____
- 8 All values in Octave are stored as what? _____
- 9 What is the numerical data type that we will be using? _____
- 10 In the Octave GUI, where are the operations executed? _____
- 11 In the Octave GUI, where are scripts written? _____
- 12 What command is used to remove all variables from the computer’s memory? _____
- 13 How would you generate all multiples of three from 18 to 102? _____
- 14 How could you generate the following matrix?
- | | |
|---|---|
| 1 | 4 |
| 3 | 2 |
- _____
- 15 What command could you use to create a 10 by 10 matrix in which all elements have a value of zero? _____
- 16 A matrix with either a single row or single column is commonly referred to as what? _____

Worksheet 1 Answer Key

1	Top-left or (1, 1)
2	2 by 5
3	-1
4	(1, 5)
5	0
6	white
7	MATLAB
8	matrices
9	double
10	Command Window
11	Editor
12	clear
13	18:3:102
14	[1 4;3 2] or [1,4;3,2]
15	zeros(10) or zeros(10,10)
16	a vector