

CIS 101 — Quiz 1 solution

Name:

Answer the following questions using the MATLAB programming language. Try to be as exact as possible. Your answers should be such that if typed into MATLAB they will produce the correct result. Exactly correct answers will receive full credit. Note that there may be more than one way to answer the question and so any correct answer will be accepted.

1. Create a column vector that has the elements 10 , e^3 , $\cos(\frac{\pi}{3})$, 20 , and $5 \ln(24)$. (1pt)

[10 ; exp(3) ; cos(pi/3) ; 5*log(24)]

2. Create the following matrix A : (1pt)

$$A = \begin{bmatrix} 2 & 4 & 6 & 8 & 10 \\ 3 & 6 & 9 & 12 & 15 \\ 7 & 4 & 21 & 28 & 35 \end{bmatrix}$$

A = [2 4 6 8 10 ; 3 6 9 12 15 ; 7 4 21 28 35]

To access the n^{th} column of matrix A use the command $A(:,n)$. Similarly to access the n^{th} row of matrix A use the command $A(n,:)$. Use this information to answer the following.

- (a) Create a three element column vector named ua that contains the third column of A . (1pt)
 $ua = A(:,3)$
- (b) Create a five element column vector named ub that contains the second row of A . (1pt)
 $ub = A(2,:)$
- (c) Create a nine element column vector named uc that contains the first, third, and fifth columns of A . (1pt)
 $uc = [A(:,1)' A(:,3)' A(:,5)']'$
- (d) Create a ten element row vector named ud that contains the first and second rows of A . (1pt)
 $ud = [A(1,:) A(2,:)]$