

MATLAB lesson 3: Matrices

Solutions to exercises

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1 Based on the lesson

1. `a=ones(2,3)`
2. `b=rand(4,3)`
3. `c=zeros(10)`
4. `c(3,4)=4`
5. `c(2,:)=2`
6. `c(5:7,6:8)=6`
7. `c(:)=3` or `c(:,:)=3`
8. `c^2` or `c*c`
9. `c.^2` or `c.*2`
10. `c/3`
11. `m=magic(4)`
12. `min(min(m))`
13. `[1,2,3;4,5,6;7,8,9]`

2 Using the MATLAB documentation

1. `[min_val,min_index]=min(m(:));[index_row,index_col]=ind2sub(size(m),min_index)`
2. `a=rand(500,1)`
3. (a) `any(a>0.5)`
(b) `any(a>0.9)`
(c) `any(a>0.99)`

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4. `indices=find(a>0.99)`

5. (a) `all(a>0.5)`

(b) `all(a>0.1)`

(c) `all(a>0.01)`