

1.  $A = \begin{bmatrix} 2 & 5 \\ 2 & 9 \\ 6 & 5 \end{bmatrix}$   $B = \begin{bmatrix} 0 & 5 \\ 7 & 0 \end{bmatrix}$

Dimensions:  $3 \times 2$  and  $2 \times 2$

$$A * B = \begin{bmatrix} 2 \times 0 + 5 \times 2 & 2 \times 5 + 5 \times 0 \\ 2 \times 0 + 9 \times 2 & 2 \times 5 + 9 \times 0 \\ 6 \times 0 + 5 \times 2 & 6 \times 5 + 5 \times 0 \end{bmatrix}$$

$A \cdot B =$  Not work

$B * A =$   $2 \times 2$   $\times$   $3 \times 2$  Not work

$B \cdot A =$  Not work

2.

$$3. \begin{cases} \underline{i_1(R_1+R_4)} - \underline{i_2 R_4} \overset{+i_3 \cdot 0}{=} V_1 \\ -i_1 R_4 + i_2(R_2+R_5+R_4) - i_3 R_4 = 0 \\ i_1 \times 0 - i_2 R_5 + i_3(R_3+R_5) = -V_2 \end{cases}$$

$$\begin{cases} i_1 \underline{175} - i_2 \underline{125} + i_3 \underline{0} = 24 \\ -i_1 \underline{125} + i_2 \underline{525} + i_3 \underline{450} = 0 \\ i_1 \underline{0} - i_2 \underline{350} + i_3 \underline{450} = -10 \end{cases}$$

$$A = \begin{bmatrix} 175 & -125 & 0 \\ -125 & 525 & 450 \\ 0 & -350 & 450 \end{bmatrix} \quad b = \begin{bmatrix} 24 \\ 0 \\ -10 \end{bmatrix} \quad x = \begin{bmatrix} i_1 \\ i_2 \\ i_3 \end{bmatrix}$$

$$x = A \setminus b;$$

$$\text{OR } x = \text{inv}(A) * b;$$

$$C = \begin{bmatrix} 1 & 4 & 2 \\ 2 & 4 & 100 \\ 7 & 9 & 7 \\ -3 & 5 & 1 \end{bmatrix}$$

4. a).  $cc = \text{mean}(C);$      0 0 0

$cc = \text{mean}(cc);$

b)  $s=0;$

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for i = 1: length(cc(:,1))
    for j = 1: length(cc(1,:))
        if x(i,j) > 0 | x(i,j) == 0
            s = s + x(i,j);
        end
    end
end

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c7.  $cc = \max(cc);$     ○ ○ ○

[max, index] =  $\max(cc);$

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HW18.

$E=1; P=28; Xold = \frac{P}{3};$

while ( $\theta > 1e-5$ )

$X_{new} = (\frac{P}{Xold^2} + 2 * Xold) / 3; Xold = X_{new};$

$E = \frac{X_{new} - Xold}{Xold};$

end

$fprintf('The cube root of \%5.2f, is \%5.2f', P, X_{new});$

# HW 17

Tasks:

1:  $x = [ \dots ]$ ;  $s = 0$ ;

for  $i = 1 : \text{length}(x)$ ;

$s = s + x(i)$ ;

end

2:  $x = [ \dots ]$ ;  $\hat{j} = 0$ ;  $s = 0$ ;

for  $i = 1 : \text{length}(x)$

if  $x(i) > 0$

$\hat{j} = \hat{j} + 1$ ;

$s = s + x(i)$ ;

end

end

~~avg~~  $\text{avg} = s / \hat{j}$ ;

3.  $x = [0 \text{ --- } ];$

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mm = x(1);  
for i = 1: length(x).  
    if x(i) > mm  
        mm = x(i);  
    end  
end
```

4.  $x = \begin{bmatrix} \# & \# & \# \\ \# & \# & \# \\ \# & \# & \# \end{bmatrix}$

~~⊗~~

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k=0;
for i = 1: length(X) (X(:, 1))
    for j = 1: length(X(1, :))
        if X(i, j) < 0
            k = k + 1;
        end
    end
end
end
```

slice(:, :, 1)

# HW 16

Task 1: k = 1:20;  
kk = 3 \* k.^2; s = 0;  
for i = 1: length(kk)  
s = s + kk(i);  
end  
fprintf('the sum is %5.1f', s)

2. ~~k~~ k = input('give a number:');  
kk = 1:k;  
kkk = 3 \* kk.^2; s = 0;  
for i = 1: length(kkk)  
s = s + kkk(i);  
end



sin ( ) @ Radians

sind ( ) degrees

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6. n = input ( ' ---- : ' )

for i = 1 : n

s = s + 1/i<sup>2</sup>;

end

Result = sqrt ( 6 \* s );

$$\sum_{k=1}^n \frac{1}{k^2}$$

