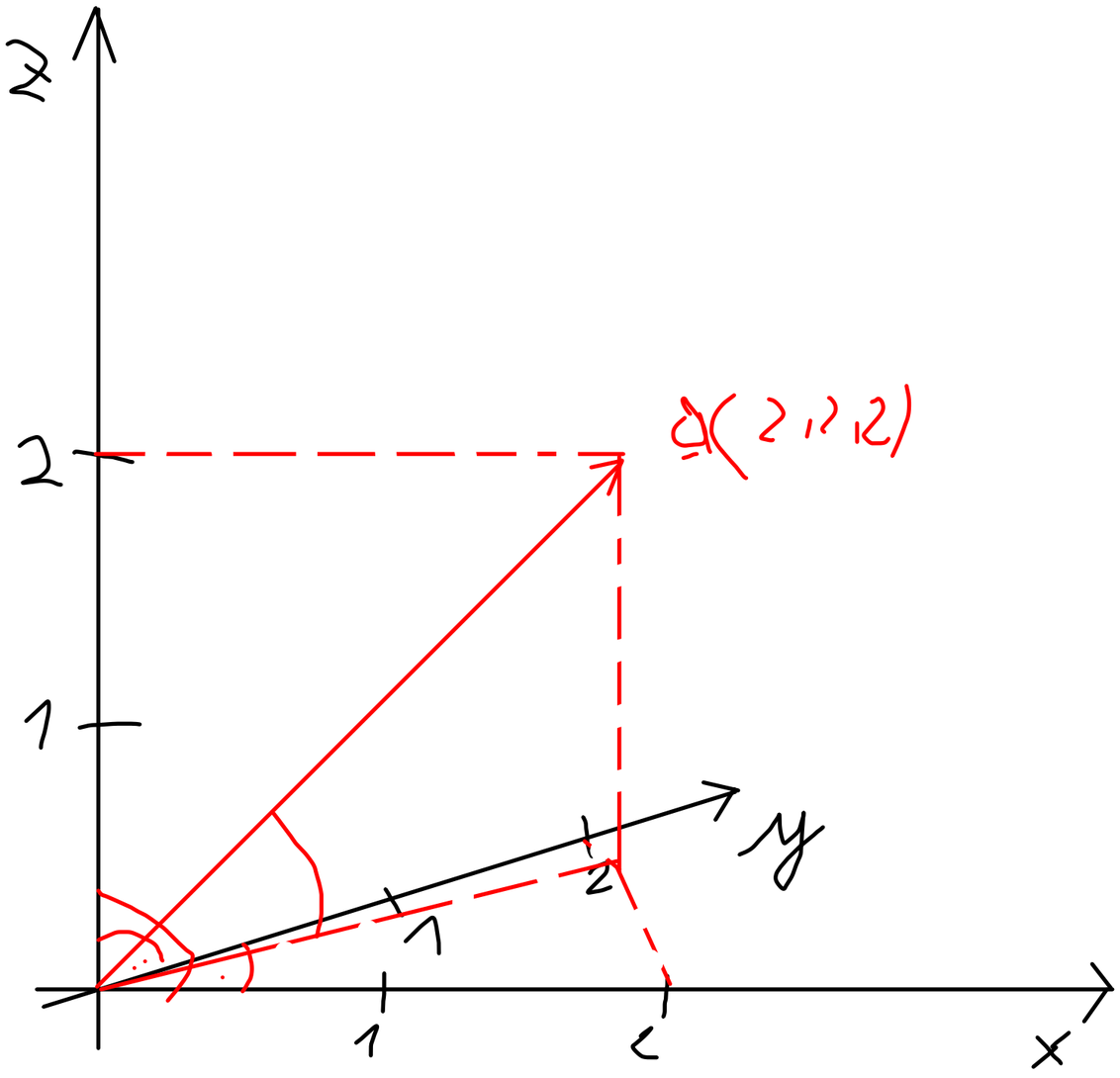
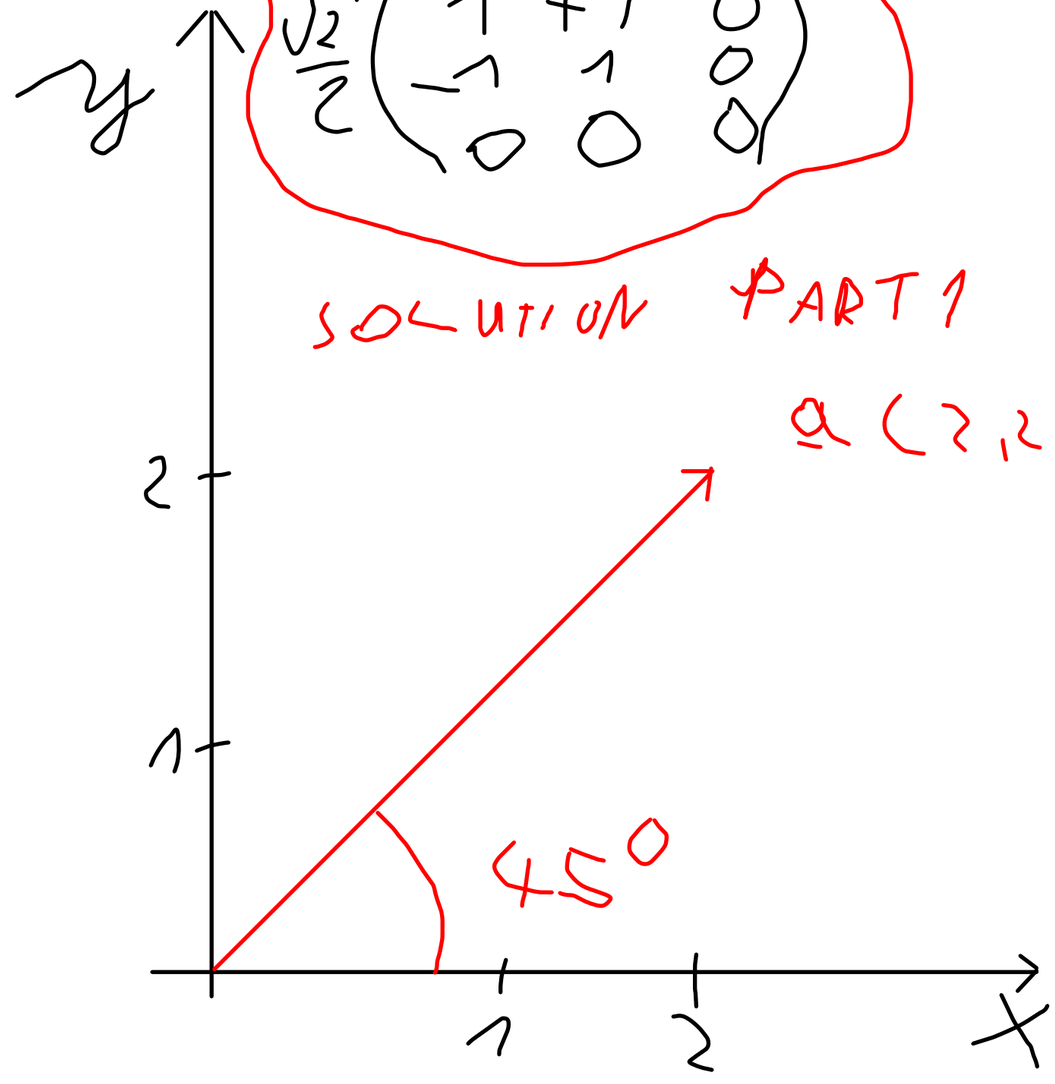


$$\frac{\sqrt{2}}{2}\begin{pmatrix} 1 & +1 & 0 \\ -1 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

SOLUTION PART 1

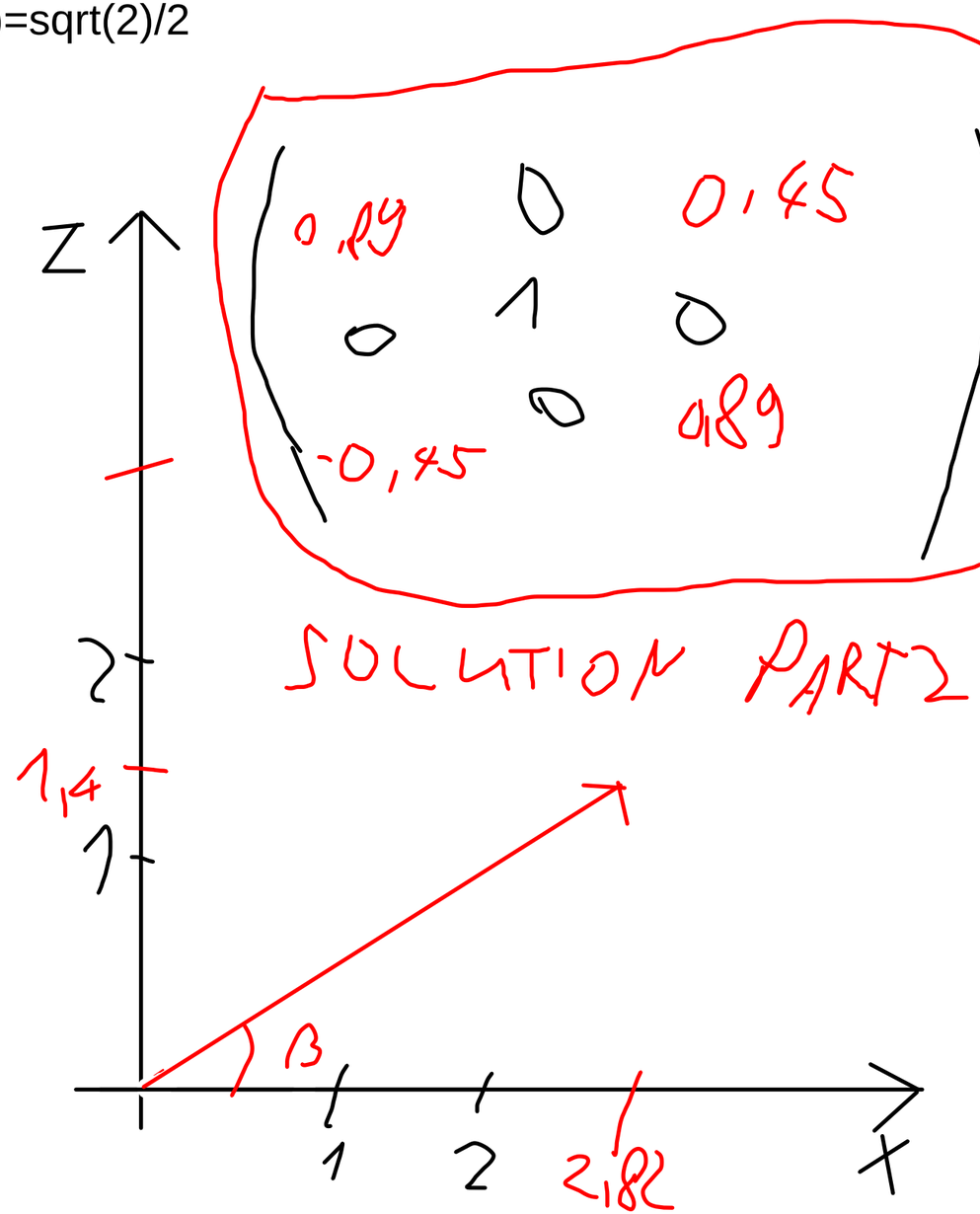


cos (alpha) = (1,0)*(2,2)/(|(1,0)|*|(2,2)|)=2/(1*sqrt(8))=2/2/sqrt(2)=1/sqrt(2)=sqrt(2)/2

$$2^{0.5}/2 \begin{pmatrix} 1 & 1 & 0 \\ -1 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix} \begin{pmatrix} 2 \\ 2 \\ 2 \end{pmatrix} = 2^{0.5}/2 \begin{pmatrix} 4 \\ 0 \\ 2 \end{pmatrix}$$

cos(beta)=(1,0)*(2*sqrt(2),sqrt(2))/(1*(8+2))=2*sqrt(2)/10=sqrt(2)/5=
=73.57 → 26,43

$$\begin{pmatrix} 0.89 & 0 & 0.45 \\ 0 & 1 & 0 \\ -0.45 & 0 & 0.89 \end{pmatrix} \cdot \text{sqrt}(2) \begin{pmatrix} 2 \\ 0 \\ 1 \end{pmatrix} = \begin{pmatrix} 3.1443 \\ 0 \\ 0 \end{pmatrix}$$



Determinant
Inverse Matrix
Matrix Power
Matrix Transpose
Matrix Multiplication
Matrix Addition/Subtraction

Back

Matrix A

	A_1	A_2	A_3
1	0.89	0	0.45
2	0	1	0
3	-0.45	0	0.89

Matrix B

	B_1
1	2.82
2	0
3	1.41

C_{11} = 0.89 x 2.82 + 0 x 0 + 0.45 x 1.41 = 3.1443

	C_1
1	3.1443
2	0
3	0

C_{21} = 0 x 2.82 + 1 x 0 + 0 x 1.41 = 0

	C_1
1	3.1443
2	0
3	0

C_{31} = -0.45 x 2.82 + 0 x 0 + 0.89 x 1.41 = -0.0141

	C_1
1	3.1443
2	0
3	-0.0141

Continue calculation

Result:

	C_1
1	3.1443
2	0
3	-0.0141