

Assignment-03

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Download all python codes from

<https://github.com/Abhishek7008/Assignment-3.git>

and latex-tikz codes from

<https://github.com/Abhishek7008/Assignment-3.git>

Question taken from

https://github.com/gadepall/ncert/blob/main/linalg/construction/gvv_ncert_constr.pdf Q.no.2.12

1 CONSTRUCTION EXERCISE 2.12

Draw rectangle OKAY with OK=7 and KA=5.

Solution

The vertices of rectangle OKAY are

$$\mathbf{O} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \mathbf{K} = \begin{pmatrix} a \\ 0 \end{pmatrix}, \mathbf{A} = \begin{pmatrix} 0 \\ c \end{pmatrix}, \mathbf{Y} = \begin{pmatrix} a \\ c \end{pmatrix} \quad (1.0.1)$$

$$\Rightarrow \mathbf{O} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \mathbf{K} = \begin{pmatrix} 7 \\ 0 \end{pmatrix}, \mathbf{A} = \begin{pmatrix} 0 \\ 5 \end{pmatrix}, \mathbf{Y} = \begin{pmatrix} 7 \\ 5 \end{pmatrix} \quad (1.0.2)$$

Where $a=7, c=5$.

$$\text{In rectangle OKAY} \quad (1.0.3)$$

$$OK = AY = 7. \quad (1.0.4)$$

$$OY = KA = 5. \quad (1.0.5)$$

Ass3.png

Fig. 1.1: Quadrilateral PLAN