

Assignment 4

Mondedla Anil

Download all python codes from (3)

https://github.com/AnilMondedla/Python/Assignment_4

and latex-tikz codes from

https://github.com/AnilMondedla/Python/Assignment_4

$$\mathbf{x} = \begin{pmatrix} 4 \\ 0 \end{pmatrix} \quad (2.0.7)$$

$$\begin{pmatrix} 1 & -2 \end{pmatrix} \begin{pmatrix} 4 \\ 0 \end{pmatrix} = 4 \quad (2.0.8)$$

$$4 = 4 \quad (2.0.9)$$

1 LINEAR FORMS Q:2.1

Question : Check which of the following are solutions of the equation

$$\mathbf{x} = \begin{pmatrix} \sqrt{2} \\ 4\sqrt{2} \end{pmatrix} \quad (2.0.10)$$

$$\begin{pmatrix} 1 & -2 \end{pmatrix} \mathbf{x} = 4 \quad (1.0.1)$$

$$\begin{pmatrix} 1 & -2 \end{pmatrix} \begin{pmatrix} \sqrt{2} \\ 4\sqrt{2} \end{pmatrix} = 4 \quad (2.0.11)$$

$$-7\sqrt{2} \neq 4 \quad (2.0.12)$$

- (5)
- | | |
|---|--|
| 1) $\begin{pmatrix} 0 \\ 2 \end{pmatrix}$ | 4) $\begin{pmatrix} \sqrt{2} \\ 4\sqrt{2} \end{pmatrix}$ |
| 2) $\begin{pmatrix} 2 \\ 0 \end{pmatrix}$ | 5) $\begin{pmatrix} 1 \\ 1 \end{pmatrix}$ |
| 3) $\begin{pmatrix} 4 \\ 0 \end{pmatrix}$ | |

$$\mathbf{x} = \begin{pmatrix} 1 \\ 1 \end{pmatrix} \quad (2.0.13)$$

2 SOLUTION

$$\begin{pmatrix} 1 & -2 \end{pmatrix} \begin{pmatrix} 1 \\ 1 \end{pmatrix} = 4 \quad (2.0.14)$$

$$-1 \neq 4 \quad (2.0.15)$$

(1)

$$\mathbf{x} = \begin{pmatrix} 0 \\ 2 \end{pmatrix} \quad (2.0.1) \quad \text{Here, } \begin{pmatrix} 4 \\ 0 \end{pmatrix} \text{ is the solution of the given equation.}$$

$$\begin{pmatrix} 1 & -2 \end{pmatrix} \begin{pmatrix} 0 \\ 2 \end{pmatrix} = 4 \quad (2.0.2)$$

$$-4 \neq 4 \quad (2.0.3)$$

(2)

$$\mathbf{x} = \begin{pmatrix} 2 \\ 0 \end{pmatrix} \quad (2.0.4)$$

$$\begin{pmatrix} 1 & -2 \end{pmatrix} \begin{pmatrix} 2 \\ 0 \end{pmatrix} = 4 \quad (2.0.5)$$

$$2 \neq 4 \quad (2.0.6)$$

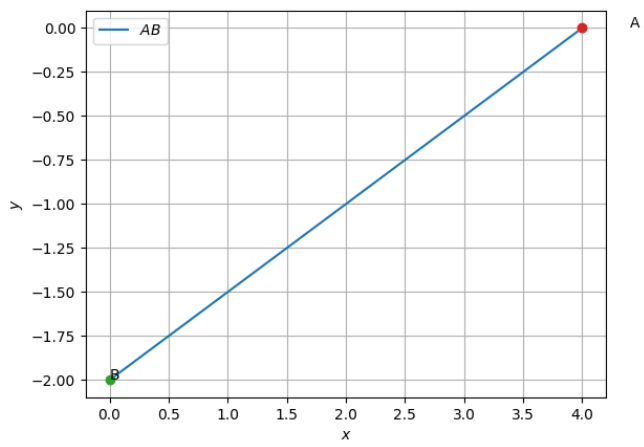


Fig. 5: Line