

1. In a laptop showroom there are laptops with RAM: 4GB, 8GB, and 16GB of different companies: A, B and C. Last week, the showroom sold 2, 1 and 3 laptops with 4GB RAM of companies A, B, and C respectively; 1, 2 and 1 laptops with 8GB RAM of companies A, B, and C respectively; and 2, 3 and 3 laptops with 16GB RAM of companies A, B and C respectively. The price of laptops with a particular GB Ram is the same irrespective of the company (i.e., laptop of companies A, B and C with 4GB RAM have the same price; similarly, laptop of companies A, B and C with 8GB RAM have the same price; and laptop of companies A, B and C with 16GB RAM have the same price). The owner of showroom earned ₹14 , ₹17 and ₹18 (in ten thousand) in that week by selling laptop of companies A, B and C respectively.

Using the above information, form the system of linear equations and find the matrix representation of the system of linear equations to find the price of 1 laptop with 4GB, 1 laptop with 8GM and 1 laptop 16 GB.

# T7

4GB 8GB 16GB

~~$$2x + y + 3z = 14$$~~

~~$$x + 2y + z = 17$$~~

~~$$2x + 3y + 3z = 18$$~~

$$2x + y + 2z = 14$$

$$x + 2y + 3z = 17$$

$$3x + y + 3z = 18$$

$$A = \begin{bmatrix} 2 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 3 \end{bmatrix}$$

$$x = \begin{bmatrix} x \\ y \\ z \end{bmatrix}$$

$$B = \begin{bmatrix} 14 \\ 17 \\ 18 \end{bmatrix}$$

Information,

	A	B	C
4GB	2	1	3
8GB	1	2	1
16GB	2	3	3
	74k	12k	18k

4GB	8GB	16GB
x	y	z

$$Ax = b$$

$$\Rightarrow \begin{bmatrix} 2 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 14 \\ 17 \\ 18 \end{bmatrix}$$

Must Revise