Dev, 19131110220

Long Type questions (section - 4)

A-2 We have, A (5, 5), B (10, 5) and C (10, 10)

$\theta = 45°$

$$R_\theta = \begin{bmatrix} \cos 45° & -\sin 45° \\ \sin 45° & \cos 45° \end{bmatrix} = \begin{bmatrix} 1/\sqrt{2} & -1/\sqrt{2} \\ 1/\sqrt{2} & 1/\sqrt{2} \end{bmatrix}$$

$$A' = R_\theta A \begin{bmatrix} x \\ y \end{bmatrix}$$

$$A' = \begin{bmatrix} 1/\sqrt{2} & -1/\sqrt{2} \\ 1/\sqrt{2} & 1/\sqrt{2} \end{bmatrix} \begin{bmatrix} 5 \\ 5 \end{bmatrix}$$

$$A' = \begin{bmatrix} 5 \times 1/\sqrt{2} & -(5 \times 1/\sqrt{2}) \\ 5 \times 1/\sqrt{2} & 5 \times 1/\sqrt{2} \end{bmatrix}$$

$$A' = \begin{bmatrix} 5/\sqrt{2} + (-5/\sqrt{2}) \\ 5/\sqrt{2} + 5/\sqrt{2} \end{bmatrix} \Rightarrow \begin{bmatrix} \sqrt{2} \\ 10/\sqrt{2} \end{bmatrix}$$

$B = (10, 5)$

$$B' = \begin{bmatrix} 1/\sqrt{2} & -(1/\sqrt{2}) \\ 1/\sqrt{2} & 1/\sqrt{2} \end{bmatrix} \begin{bmatrix} 10 \\ 5 \end{bmatrix}$$

$$B' = \begin{bmatrix} 10/\sqrt{2} + (-1/\sqrt{2}) \times 5 \\ 10/\sqrt{2} + 5/\sqrt{2} \end{bmatrix} \Rightarrow \begin{bmatrix} 5/\sqrt{2} \\ 15/\sqrt{2} \end{bmatrix}$$

$C = (10, 10)$

$C' = R_\theta C$

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$$C' = \begin{bmatrix} 1/\sqrt{2} & -(1/\sqrt{2}) \\ 1/\sqrt{2} & 1/\sqrt{2} \end{bmatrix} \begin{bmatrix} 10 \\ 10 \end{bmatrix}$$

$$C' = \begin{bmatrix} \frac{10}{\sqrt{2}} + \left[-\frac{10}{\sqrt{2}}\right] \\ \frac{10}{\sqrt{2}} + \frac{10}{\sqrt{2}} \end{bmatrix}$$

$$C' = \begin{bmatrix} \sqrt{2} \\ \frac{20}{\sqrt{2}} \end{bmatrix} \Rightarrow$$

After rotating,

$$A' = \begin{bmatrix} \sqrt{2} \\ \frac{10}{\sqrt{2}} \end{bmatrix}$$

$$B' = \begin{bmatrix} \frac{5}{\sqrt{2}} \\ \frac{15}{\sqrt{2}} \end{bmatrix}$$

$$C' = \begin{bmatrix} \sqrt{2} \\ \frac{20}{\sqrt{2}} \end{bmatrix}$$

Ans=3 a) CRT Abbreviations of cathode-ray tube, the technology used in most television and computer display screens. A CRT works by moving an electron beam back and forth across the back of the screen. Each time the beam makes a pass across the screen, it lights up phosphor dots on the inside of glass tube, thereby illuminating the active positions of the screen. By drawing many such lines from the top to the bottom of the screen, it

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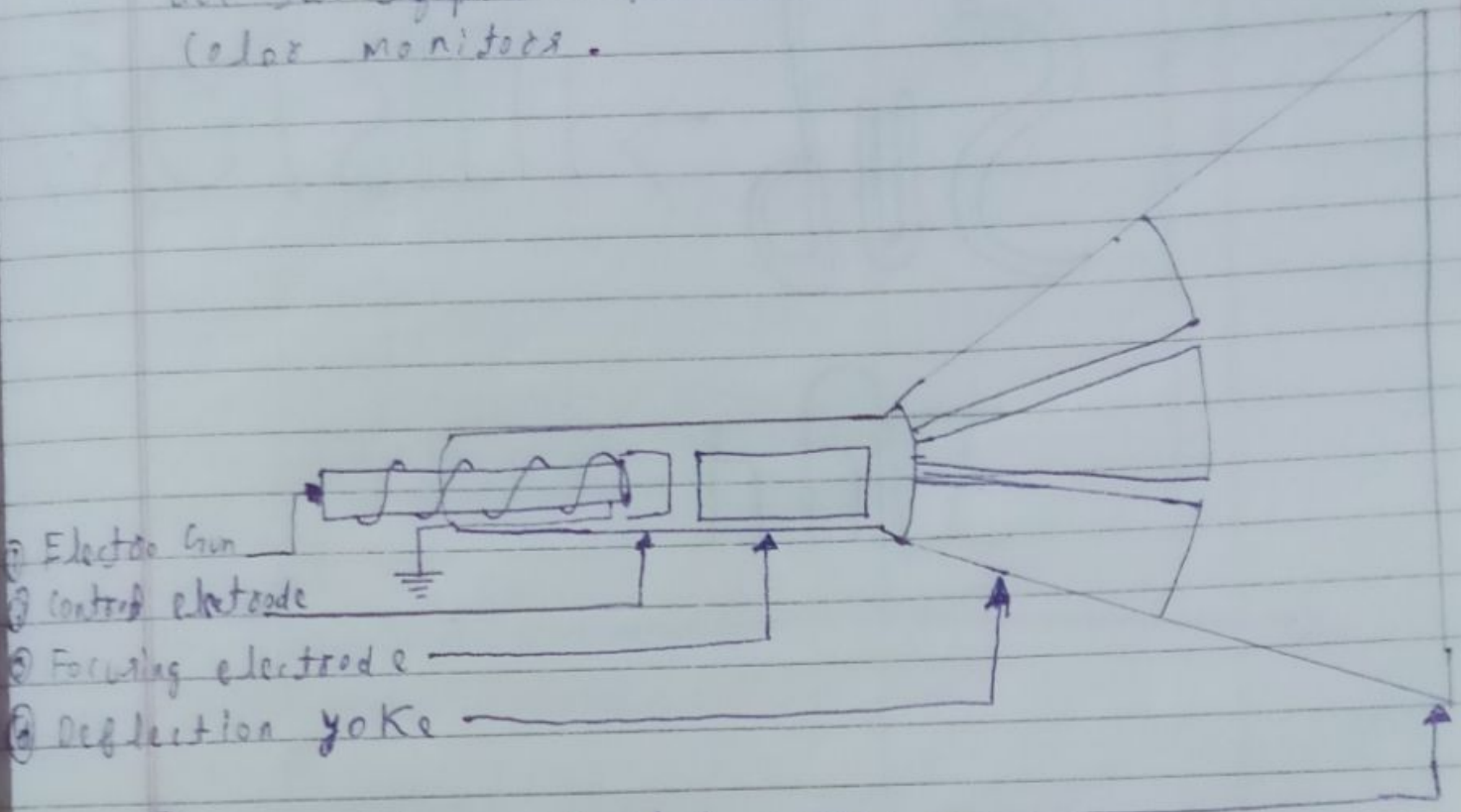
creates an entire screen of image. CRT monitor are two types: Monochrome monitors and Color monitors.



A-4 @ A frame buffer (or sometimes framestore) is a portion of random-access memory (RAM) containing a bitmap that drives a video quality x display. It is a memory buffer containing data representing all the pixels in a complete video frame.

The primary roles of the frame buffer are the storage, conditioning, and output of the video signals that drive the display device.

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