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Question No =(3)

Part =(A)

Ans: Vector Display is a faster. Becuse vector display is good for displaying line as it describes a length and a direction. Draw object by electron beam, beam can move in any direction to from an object. In Current Situation drawing Square.

vector display redraws as quickly as possible given the number of objects on the screen. while CRT based vactar displays redraw the images at a fixed rate.

(e.g) 60 time per second no mater how Complex the Scene.

CRT Scanning Speed = 3cm / milli Second
Size of display = 100m x 10cm
outline of Square = 6cm (each sides)

Approximate Time display (?)

(2)

Solution:

As Square has (4) side and (1) side is 6cm

=> So,

4 Sides = 24cm (total)

As, 3cm Scanning take 1m/s

Total Scanning = $\frac{24cm}{3cm}$ = 8 times.

=> Therefore Total (8) scaning will be occure.

and display Time will be

$= 8 \times 10^{-3}$

$= 0.008$ Secands

or Total Display Time: 8 m/s

Part = B

Ans: Raster Display is better for displaying Solid shaped Colored objects. Becuse raster ~~Colored~~ display is Composed of Pixels and each Pixcle Consider of Colers, also the display is bright and have good Contrast.

Raster display would be better for filled Square Shape becuse.

Reason

(i) advance vector system can provide a limited amount of shadding.

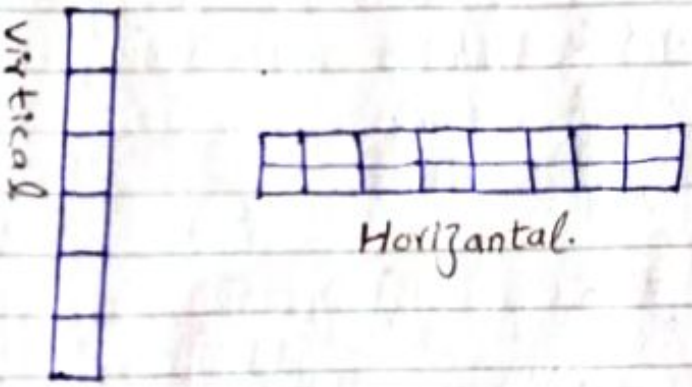
(ii) Refresh vector displays are limetd in how many lines or how much text can be shown without refresh flicker.

(iii) it's diffrent to use vecter display for realistic (Shadded) images.

How - even raster display is cheap and paint entire Screen on each Scan use for area filling.

Question No (1)

Ans: On a Black of White display if The Pixel is vectangular in Shape with height of Pixel "3x" of width. is "x" Then according to The given Situation The line Can be drawn as follow.



The vertical line will be The Thinnest Possible line as compared to Horizentc line. As The vectial line travels on Y-axis of its width is 'x' whet horizantal line Travel on x-axis of it height is '3x' which is more Than width.

Question = (2)

Part No = (A)

Ans:

We use direct Color system for Common use becuse of True Color system displays more Colors That discernble by human eye.

In direct coler system.

RGB ⇒ R = 8 bits
G = 8 bits
B = 8 bits

⇒ N = 8

$2^N = 2^{24}$ = 16,777,216 Colars.

also memory frames

⇒ In direct Colour System

RGB ⇒ R = 5 bits
G = 6 bits
B = 5 bits

$N_r = 5$ $N_g = 6$ $N_b = 5$

⇒ $2^N = 2^{N/6}$ = 65,536 Colors Perfernce.

Reason No = (a)

More Colors Than discernable by human eye.

Reson = (b)

More Colors require more memory frames.
That why we Prefer direct Color over True Colore in Common use.

Part = (B)

Given :

⇒ number of bits used for Red Color = Nr 4bits.

⇒ no of bits used for blue Color = NB = ?
we have to find Blue Color bits?

While total Colors = 8192
(4+5+NB)

⇒ $2^{} = 8192 \longrightarrow (i)$

As $2^8 = 8192 \longrightarrow (ii)$

Compare The Power of 2 of eq (1) and eq (2)

$\Rightarrow \quad 4+5+N_B = 13$

$\Rightarrow \quad N_B = 13-4-15$

$\Rightarrow \quad N_B = 4 \text{bits}$

So The number of bits for Blue Color is 4bit.

4bits will be used for Blue Color to form 8192 colors for each Pixcel.