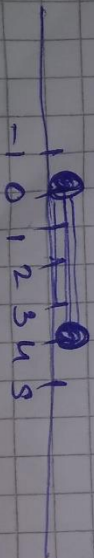


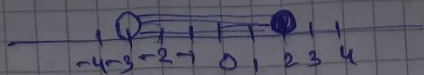
04) i)  $(-\infty, -5)$  ~~ii)~~  $x_2 (x_0 - 5 < x < x + 5, x \in \mathbb{R})$



ii)  $[0, 4]$   $x_2 (x: 0 \leq x \leq 4, x \in \mathbb{R})$



$$iii) (-3, 2] \quad M = \{x: -3 < x \leq 2, x \in \mathbb{R}\}$$



$$05) \quad \frac{p^{\frac{1}{2}} q^2 r^{\frac{2}{3}}}{p^{\frac{1}{4}} q^{\frac{1}{2}} r^{\frac{1}{6}}} \quad p=16, q=9, r=4$$

$$= \frac{16^{\frac{1}{2}} \times 9^2 \times 4^{\frac{2}{3}}}{16^{\frac{1}{4}} \times 9^{\frac{1}{2}} \times 4^{\frac{1}{6}}}$$

$$= \frac{4^{2 \times \frac{1}{2}} \times 3^{2 \times 2} \times 2^{2 \times \frac{2}{3}}}{4^{2 \times \frac{1}{4}} \times 3^{2 \times \frac{1}{2}} \times 2^{2 \times \frac{1}{6}}}$$

$$= \frac{4 \times 3^4 \times 2^{\frac{4}{3}}}{4^{\frac{1}{2}} \times 3 \times 2^{\frac{1}{3}}}$$

$$= \frac{4 \times 81 \times 2.5}{2 \times 3 \times 1.25}$$

$$= \frac{810}{7.5}$$

$$= 108 //$$

$$1) \quad A = \begin{bmatrix} 0 & -2 & -3 \\ 1 & 3 & 3 \\ -1 & -2 & -2 \end{bmatrix}$$

$$Adj(A) = \begin{bmatrix} 0 & 2 & 2 \\ -2 & -3 & 2 \\ 3 & -3 & 2 \end{bmatrix}$$

$$A^{-1} = \frac{1}{\det(A)} \times Adj(A)$$

$$= \begin{bmatrix} 0 & 4 & 4 \\ -4 & 6 & 4 \\ -6 & 6 & -4 \end{bmatrix}$$



$$2) \quad \underset{a}{x^2} + \underset{b}{3x} - \underset{c}{10} = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-(3) \pm \sqrt{3^2 - 4 \times 1 \times -10}}{2 \times 1}$$

$$x = \frac{-3 \pm \sqrt{9 - (-40)}}{2}$$

$$x = \frac{-3 \pm \sqrt{\cancel{49} + 49}}{2}$$

$$x = \frac{-3 \pm 7}{2}$$

$$x = \frac{-3+7}{2} \text{ or } x = \frac{-3-7}{2}$$

$$x = \frac{4}{2} \text{ or } \cancel{x = \frac{-10}{2}}$$

$$x = 2 \text{ or } x = -5 //$$

$$Q3) (\cos 15^\circ + \sin 15^\circ)$$

$$\cos^2 15^\circ + \sin^2 15^\circ$$

$$\cos 30^\circ + \sin 30^\circ$$

$$\frac{\sqrt{3}}{2} + \frac{1}{2}$$

$$\frac{\sqrt{3}+1}{2}$$