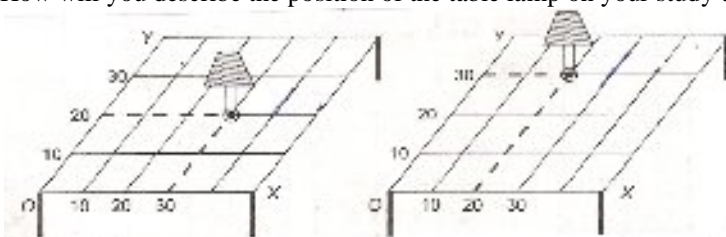


- If two polynomials $ax^3 + 4x^2 + 3x - 4$ & $x^3 - 4x + a$ leave the same remainder when divided by $(x - 3)$, find the value of a .
- Evaluate using identities:- (a) 103×97 (b) $(0.99)^2$ (c) 105^3
- Find the remainder when $4x^3 - 3x^2 + 2x - 4$ is divided by $x + 2$.
- Show that $(x - 1)$ is a factor of $x^{10} - 1$
- Find the value of a , if $(x - a)$ is a factor of $x^3 - a^2x + x + 2$.
- Determine the value of a for which the polynomial $2x^4 - ax^3 + 4x^2 + 2x + 1$ is divisible by $(1 - 2x)$.
- Factorize the polynomials:-
 (a) $x^3 - 6x^2 + 11x - 6$ (b) $(a^2 - b^2)^3 + (b^2 - c^2)^3 + (c^2 - a^2)^3$
 (c) $x^3 + 13x^2 + 31x - 45$ given that $x + 9$ is a factor
 (d) $8x^3 + 27z^3 + z^3 - 18xyz$ (e) $(a + b)^3 + (b + c)^3 + (c + a)^3 - 3(a + b)(b + c)(c + a)$
- Factorize:-
 (a) $a^3 - 0.216$ (b) $2x^2 - \frac{5}{6}x + \frac{1}{12}$ (c) $(x + 1)^3 + (x - 1)^3$
- Give possible expressions for the length and breadth of a rectangle having $A = 35y^2 + 13y - 12$ (Area).
- Evaluate using a suitable identity:- $(1.93)^3 + (0.07)^3 - (2)^3$
- Find the product: $(2x - y + 3z)(4x^2 + y^2 + 9z^2 + 2xy + 3yz - 6xz)$
- Factorize by splitting the middle term :
 (a) $9x^2 - 3x - 9$ (b) $x^2 + 14x + 40$ (c) $5x^2 + 16x + 3$

- Write the coordinates of a point which:-
 (a) Lies on the x-axis and is at a distance of 4 units to the right of the origin.
 (b) Lies on the y-axis and is at a distance of y units below the x-axis.
 (c) Is at a distance of 3 units from the x-axis and 7 units from the y-axis. [there would be four such points]
- Draw the graphs of the eqs:-
 (a) $3x - 2y = 7$ (b) $y = -2$
 on the same pair of axes. Read the coordinates of their point of intersection.
- Find the point where the line represented by the equation $5y - 3x - 10 = 0$ cuts the y-axis.
- Draw the graph of the line $3x + 4y = 18$. With the help of graph find value of y when $x = 2$. (show this point on the graph)
- On a graph draw a quadrilateral whose vertices are $(1,1)$, $(2,4)$, $(8,4)$ and $(10,1)$. Justify the quadrilateral.
- How will you describe the position of the table lamp on your study table to another person?



- Draw the graph of $y = 2x + 4$. Use the graph to find the area between the line and the axes.
- in which quadrant will the point lie, if:-
 (a) ordinate is 3 and abscissa is -7
 (b) abscissa is -10 and ordinate is -4
 (c) Ordinate is 4 and abscissa is -6 .
- Fill in the blanks:-
 (a) The coordinates of the origin 0 are
 (b) The y coordinate of every point on the x-axis is
 (c) Distance along the x-axis is called
 (d) Distance along the y-axis is called
 (e) The point $(x,y) = (y,x)$ only if