



Asignatura: Matemáticas	Trimestre:	No. Lista:	Fecha:
Estudiante:	Curso:	Docente: Lic. Geovanni Saquicela	

Realizar las siguiente divisiones

$$x^5 - x^4 + x^2 - x \text{ para } x^3 - x^2 + x$$

$\begin{array}{r} x^5 - x^4 + x^2 - x \\ \hline \\ \\ \hline \\ \\ \\ \hline \end{array}$	$\begin{array}{r} x^3 - x^2 + x \\ \hline \\ \end{array}$
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$$\frac{1}{3}x^3 - \frac{35}{36}x^2y + \frac{2}{3}xy^2 - \frac{3}{8}y^3 \text{ para } \frac{2}{3}x - \frac{3}{2}y$$

The diagram illustrates the long division of the polynomial $\frac{1}{3}x^3 - \frac{35}{36}x^2y + \frac{2}{3}xy^2 - \frac{3}{8}y^3$ by the binomial $\frac{2}{3}x - \frac{3}{2}y$. The division is performed in four steps, with each step showing the current dividend, the divisor, and the resulting quotient term.

Step 1: The dividend is $\frac{1}{3}x^3 - \frac{35}{36}x^2y + \frac{2}{3}xy^2 - \frac{3}{8}y^3$. The divisor is $\frac{2}{3}x - \frac{3}{2}y$. The first term of the quotient is $\frac{1}{6}x^2$.

Step 2: The dividend is $-\frac{5}{12}x^2y + \frac{2}{3}xy^2 - \frac{3}{8}y^3$. The divisor is $\frac{2}{3}x - \frac{3}{2}y$. The second term of the quotient is $\frac{5}{12}xy$.

Step 3: The dividend is $\frac{2}{3}xy^2 - \frac{3}{8}y^3$. The divisor is $\frac{2}{3}x - \frac{3}{2}y$. The third term of the quotient is $\frac{2}{3}y^2$.

Step 4: The dividend is 0 . The divisor is $\frac{2}{3}x - \frac{3}{2}y$. The final quotient is $\frac{1}{6}x^2 + \frac{5}{12}xy + \frac{2}{3}y^2$.