Division of Algebraic Expressions Ex 8.4 Q17

Answer :

$$
\begin{array}{r}
3x^2+4x+1 \\
2x-3\overline{)\,6x^3-x^2-10x-3} \\
\underline{6x^3-9x^2} \\
\quad 8x^2-10x-3 \\
\quad \underline{8x^2-12x} \\
\qquad 2x-3 \\
\qquad \underline{2x-3} \\
\qquad\quad 0
\end{array}
$$

$$\text{Quotient} = 3x^2+4x+1$$

$$\text{Remainder} = 0$$

Division of Algebraic Expressions Ex 8.4 Q18

Answer :

$$
\begin{array}{r}
2x-5 \\
3x^2+13x+13\overline{)\,6x^3+11x^2-39x-65} \\
\underline{6x^3+26x^2+26x} \\
\quad -15x^2-65x-65 \\
\quad \underline{-15x^2-65x-65} \\
\quad\quad 0
\end{array}
$$

$$\text{Quotient} = 2x-5$$

$$\text{Remainder} = 0$$

Division of Algebraic Expressions Ex 8.4 Q19

Answer :

$$\text{Quotient} = 10x^2-3x-12$$

$$\text{Remainder} = 0$$

$$
\begin{array}{r}
10x^2-3x-12 \\
3x^2+2x-4\overline{)\,30x^4+11x^3-82x^2-12x+48} \\
\underline{30x^4+20x^3-40x^2} \\
\quad -9x^3-42x^2-12x+48 \\
\quad \underline{-9x^3-6x^2+12x} \\
\quad\quad -36x^2-24x+48 \\
\quad\quad \underline{-36x^2-24x+48} \\
\quad\quad\quad 0
\end{array}
$$

Division of Algebraic Expressions Ex 8.4 Q20

Answer :

$$
\begin{array}{r}
3x^2+4x+2 \\
3x^2-4x+2 \overline{)\,9x^4-4x^2+4} \\
\underline{9x^4+6x^2 \quad -12x^3} \\
\quad\; 12x^3-10x^2+4 \\
\quad\; \underline{12x^3-16x^2 \quad +8x} \\
\qquad\quad 6x^2-8x+4 \\
\qquad\quad \underline{6x^2-8x+4} \\
\qquad\qquad\quad 0
\end{array}
$$

$\therefore$ Quotient = $3x^2 + 4x + 2$ and remainder = 0.

********** END **********