Division of Algebraic Expressions Ex 8.4 Q22

Answer :

$$
\begin{array}{r|l}
 & 5y^3+\frac{26}{3}y^2+\frac{25}{9}y+\frac{80}{27} \\
\hline
3y-2 & 15y^4+16y^3-9y^2+\frac{10}{3}y-6 \\
 & \underline{15y^4-10y^3} \quad - \quad + \\
 & 26y^3-9y^2+\frac{10}{3}y+6 \\
 & \underline{26y^3-\frac{52}{3}y^2} \quad - \quad + \\
 & \frac{25}{3}y^2+\frac{10}{3}y+6 \\
 & \underline{\frac{25}{3}y^2-\frac{50}{9}y} \quad - \quad + \\
 & \frac{80}{9}y-6 \\
 & \underline{\frac{80}{9}y-\frac{160}{27}} \quad - \quad + \\
 & -\frac{2}{27}
\end{array}
$$

$\therefore$ Quotient = $5y^3 + (26/3)y^2 + (25/9)y + (80/27)$

Remainder = (− 2/27)

Coefficient of y^3 = 5

Coefficient of y^2 = (26/3)

Coefficient of y = (25/9)

Constant = (80/27)

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