

$$\int \frac{3x^3 - 2x^2 + 7}{2x + 3} dx =$$

$$\begin{array}{r}
 \cancel{3x^3} - 2x^2 \quad + 7 \\
 \underline{- \cancel{3x^3} - \frac{9}{2}x^2} \\
 -\frac{13}{2}x^2 \quad + 7 \\
 \underline{+\frac{13}{2}x^2 + \frac{39}{4}x} \\
 \frac{39}{4}x \quad + 7 \\
 \underline{-\frac{39}{4}x - \frac{117}{8}} \\
 -\frac{61}{8}
 \end{array}
 \quad \left| \begin{array}{l}
 2x+3 \\
 \hline
 \frac{3}{2}x^2 - \frac{13}{4}x + \frac{39}{8}
 \end{array} \right.$$

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$$\int \left(\frac{3}{2}x^2 - \frac{13}{4}x + \frac{39}{8} - \frac{\frac{61}{8}}{2x+3} \right) dx =$$

$$\frac{3}{2} \cdot \frac{x^3}{3} - \frac{13}{4} \cdot \frac{x^2}{2} + \frac{39}{8}x - \frac{61}{8} \cdot \frac{1}{2} \int \frac{2}{2x+3} dx =$$

$$\boxed{\frac{x^3}{2} - \frac{13x^2}{8} + \frac{39x}{8} - \frac{61}{16} \ln|2x+3| + C}$$