

Rechnen mit Zahlen und Variablen Aufgabe 76

Berechnen Sie:

$$\begin{array}{r} 2a + 3 \\ 3a - 2 \\ \hline 2a - 2 \end{array} \quad \begin{array}{r} 3a - 2 \\ 5 \\ \hline 3a + 3 \end{array} \quad \begin{array}{r} 5 \\ 6a^2 - 6 \\ \hline 6a^2 - 6 \end{array}$$

$$2a - 2 = 2(a - 1)$$

$$3a + 3 = 3(a + 1)$$

$$6a^2 - 6 = 6(a^2 - 1) = 6(a - 1)(a + 1) \quad 3. \text{ Binom}$$

$$\text{Hauptnenner} = 6(a - 1)(a + 1)$$

$$= \frac{3(a + 1)(2a + 3) - 2(a - 1)(3a - 2) - 5}{6(a - 1)(a + 1)} =$$

$$= \frac{6a^2 + 15a + 9 - 6a^2 + 10a - 4 - 5}{6(a - 1)(a + 1)} = \frac{\mathbf{25a}}{\mathbf{6(a - 1)(a + 1)}}$$