

$$\begin{aligned} \frac{3y}{y+9} + \frac{6y^2}{y^2-81} - \frac{5}{y-9} &= \frac{(3y)(y-9)}{(y+9)(y-9)} + \frac{6y^2}{(y+9)(y-9)} - \frac{5(y+9)}{(y-9)(y+9)} \\ &= \frac{3y^2 - 27y}{(y+9)(y-9)} + \frac{6y^2}{(y+9)(y-9)} - \frac{5y + 45}{(y+9)(y-9)} \\ &= \frac{3y^2 - 27y + 6y^2 - 5y - 45}{(y+9)(y-9)} = \frac{9y^2 - 32y - 45}{(y+9)(y-9)} \end{aligned}$$