

If $a \neq b$, $\frac{9}{(x+a)(x+b)} = \frac{9}{b-a} \left(\frac{1}{x+a} - \frac{1}{x+b} \right)$, so if $a \neq b$, then

$$\begin{aligned} \int \frac{9dx}{(x+a)(x+b)} &= \frac{9}{b-a} (\ln|x+a| - \ln|x+b|) + C \\ &= \frac{9}{b-a} \ln \left| \frac{x+a}{x+b} \right| + C \end{aligned}$$

If $a = b$, then $\int \frac{9dx}{(x+a)^2} = -\frac{9}{x+a} + C$.