

* Factor $a^2 - 81$

$$1a^2 + 0a - 81$$

add up to zero

factors of 81

$$\begin{array}{r} 81 \\ \hline 1 \cdot 81 \\ 3 \cdot 27 \\ \boxed{9 \cdot 9} \end{array}$$

$$(9)(-9) = -81$$

$$\underline{9} + \underline{-9} = 0$$

$$(a+9)(a-9)$$

$$= a^2 - 9a + 9a - 81$$

$$\boxed{a^2 - 81}$$

$$\boxed{(a+9)(a-9)}$$