

① GCF

② Perfect Squares

Difference of Two Squares "Oab"

$$a^2 - b^2 = (a+b)(a-b) \quad -ab + ab = 0$$

Perfect Square Trinomials

$$a^2 + 2ab + b^2 = (a+b)(a+b) = (a+b)^2$$

$$a^2 - 2ab + b^2 = (a-b)(a-b) = (a-b)^2$$

③ $a = 1$ $a \cdot c = \frac{ac}{j \cdot k} \rightarrow (a+j)(a+k)$

④ a.c method

30
⊕
x

Ex: $\frac{7x^2}{7} - \frac{7x}{7} - \frac{84}{7} = 7(x^2 - x - 12)$
 $7(x+3)(x-4)$

Ex: $\frac{5r^2}{5} - \frac{245}{5} = 5(r^2 - 49)$
 $5(r+7)(r-7)$

Ex: $25x^2 - 65x - 30 = 5(5x^2 - 13x - 6)$
 $a \cdot c = 5(-6) = -30$
 $\begin{matrix} 2 \cdot 15 \\ -3 \cdot 10 \\ \hline 5 \cdot 6 \end{matrix} \rightarrow 30$
 $5[5x(x-3) + 2(x-6)]$
 $5(x-3)(5x+2)$

Ex: $16x^4 - 81y^4$

$$(4x^2 + 9y^2)(4x^2 - 9y^2)$$

$$(4x^2 + 9y^2)(2x + 3y)(2x - 3y)$$