

\*  $(a-b)(a^2+ab+ab^2)$

$$a^3 + \underbrace{a^2b} + \underline{\underline{ab^2}} - \underbrace{ba^2} - \underline{\underline{ab^2}} - b^3$$

$\downarrow$   
 $-a^2b$

$$a^3 - b^3$$