

2 Terms

GCF	Difference of Squares (DOS)	Sum/Difference of Cubes (wSOP)
<p>Rule: LOOK for common factors (until there are none left).</p>	<p>Rule: $\underbrace{a^2 - b^2}_{\text{Perfect Squares}} = (a+b)(a-b)$ </p>	<p>Rule(s): $a^3 + b^3 = (a+b)(a^2 - ab + b^2)$ $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$ </p>
<p>Examples:</p> <p><u>EX.1</u> $x^2 - 3x$ GCF: x $x(x - 3)$</p> <p><u>EX.2</u> $4x^2 - 28$ $\begin{array}{r l} x \cdot x & 1 \cdot 28 \\ 1 \cdot 4 & 2 \cdot 14 \\ -2 \cdot 2 & 4 \cdot 7 \end{array}$ $4(x^2 - 7)$</p> <p><u>EX.3</u> $9x^2 + 27x$ $\begin{array}{r l} x \cdot x & x \\ 1 \cdot 9 & 1 \cdot 27 \\ -3 \cdot 3 & 3 \cdot 9 \end{array}$ $9x(x + 3)$</p>	<p>Examples:</p> <p><u>EX.1</u> $4x^2 - 9$ $\begin{array}{r} \sqrt{4x^2} \\ 2x \end{array} \quad \begin{array}{r} \sqrt{9} \\ 3 \end{array}$ $(2x + 3)(2x - 3)$</p> <p><u>EX.2</u> $49x^2 - 25y^2$ $\begin{array}{r} \sqrt{49x^2} \\ 7x \end{array} \quad \begin{array}{r} \sqrt{25y^2} \\ 5y \end{array}$ $(7x + 5y)(7x - 5y)$</p> <p><u>EX.3</u> $16x^2 - 1$ $\begin{array}{r} \sqrt{16x^2} \\ 4x \end{array} \quad \begin{array}{r} \sqrt{1} \\ 1 \end{array}$ $(4x + 1)(4x - 1)$</p>	<p>Examples:</p> <p><u>EX.1</u> $8x^3 + 27$ $\begin{array}{r} \sqrt[3]{8x^3} \\ 2x = a \end{array} \quad \begin{array}{r} \sqrt[3]{27} \\ 3 = b \end{array}$ $(a+b)(a^2 - ab + b^2)$ $(2x + 3)(4x^2 - 6x + 9)$</p> <p><u>EX.2</u> $125x^3 - 1$ $\begin{array}{r} \sqrt[3]{125x^3} \\ 5x = a \end{array} \quad \begin{array}{r} \sqrt[3]{1} \\ 1 = b \end{array}$ $(a-b)(a^2 + ab + b^2)$ $(5x - 1)(25x^2 + 5x + 1)$</p> <p><u>EX.3</u> $27x^3 + 64$ $\begin{array}{r} \sqrt[3]{27x^3} \\ 3x \end{array} \quad \begin{array}{r} \sqrt[3]{64} \\ 4 \end{array}$ $(3x + 4)(9x^2 - 12x + 16)$</p>

SAME POSITIVE POSITIVE

calculator

$Y_1 = \# / X$

2nd TABLE