## Factoring out a Common Term of a Polynomial

$3 x^{2}+12 x$
$4 x^{2}+16 x+4$
$2 x^{2}+x$

$$
-2 x+7
$$

$$
-5 x^{2}-15 x+20
$$

Factoring Quadratics in the form of $A x^{2}+B x+C$; where " $A$ " $=1$.
$x^{2}+5 x+6$
$x^{2}-13 x-30$
$x^{2}-7 x+10$
$x^{2}+3 x+5$

Factoring Quadratics in the form of $A x^{2}+B x+C$; where "A" DOES NOT $=1$. ALWAYS NEED TO CHECK FOR A COMMON FACTOR FIRST

$$
2 x^{2}+13 x+15
$$

$9 x^{2}+21 x+6$
$-x^{2}+7 x+8$
$-6 x^{2}+3 x+18$

Factoring the Difference of Two Squares

$$
\mathrm{A}^{2}-\mathrm{B}^{2}=(\mathrm{A}-\mathrm{B})(\mathrm{A}+\mathrm{B})
$$

$x^{2}-16$

$$
4 x^{2}-49
$$

$$
3 x^{2}-75
$$

$$
-x^{2}+4
$$

## Factoring the Difference Perfect Square Trinomials

$$
x^{2}+4 x+4
$$

$$
4 x^{2}-12 x+9
$$

$$
-25 x^{2}-10 x-1
$$

