

FACTORING TRINOMIALS ($a=1$): GUIDED NOTES

Factor each polynomial.

1) $x^2 + 2x - 15$

2) $2x^2 - 16x + 24$

3) $x^2 + 10x + 24$

4) $x^2 - 16$

- 1) Find and factor out the GCF.
- 2) Find the factors of a .
- 3) Find the factors of $|c|$.
- 4) Decide if you need a sum or difference of $|b|$.
 - If $+c$, then you need a **sum**.
 - If $-c$, then you need a **difference**.
- 5) Find the right pair of a and c values such that the products of the factors of a and c have a sum/difference of $|b|$.
- 6) Write the two factors.
 - Coefficients are from the factors of a .
 - Constants are from the factors of c .
 - Use c and b to determine the \pm symbols.
 - If $+c$, then the signs are the **same**.
 - If $-c$, then the signs are **different**.
 - The bigger product gets the same sign as b .

FACTORING TRINOMIALS ($a \neq 1$): GUIDED NOTES

Factor each polynomial.

1) $5x^2 + 23x + 24$

2) $12x^2 + 51x - 45$

3) $-12x^2 + x + 20$

If $a > 0$, then the GCF is positive.

If $a < 0$, then the GCF is negative.