

Notes: Factoring Trinomials when a = 1

QUESTIONS

NOTES:

$$ax^2 + bx + c$$

Trinomials can be written as a product of two binomials

ax^2	$\underline{\quad}x$
$\underline{\quad}x$	c

STEPS to Factoring:

- Use a M/S table to split the middle term:
 M = factors that multiply to the 'c' term
 S = sum of the factors that add to the 'b' term
- Fill in box and work backwards using GCF to find factors

Examples:

$$x^2 + 8x + 12 \quad a = \underline{\quad} \quad b = \underline{\quad} \quad c = \underline{\quad}$$

M	S

FACTORS: _____

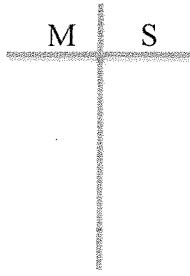
$$a^2 - 9a + 20 \quad a = \underline{\quad} \quad b = \underline{\quad} \quad c = \underline{\quad}$$

M	S

FACTORS: _____

$$x^2 + 3x - 18$$

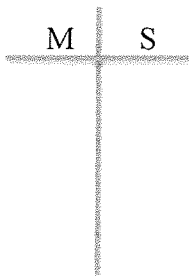
$$a = \underline{\quad} \quad b = \underline{\quad} \quad c = \underline{\quad}$$



FACTORS: _____

$$x^2 - 6x - 42$$

$$a = \underline{\quad} \quad b = \underline{\quad} \quad c = \underline{\quad}$$



FACTORS: _____

Factoring Trinomials ($a = 1$)**Factor each completely.**

1) $b^2 + 8b + 7$

2) $n^2 - 11n + 10$

3) $m^2 + m - 90$

4) $n^2 + 4n - 12$

5) $n^2 - 10n + 9$

6) $b^2 + 16b + 64$

7) $m^2 + 2m - 24$

8) $x^2 - 4x + 24$

9) $k^2 - 13k + 40$

10) $a^2 + 11a + 18$

11) $n^2 - n - 56$

12) $n^2 - 5n + 6$