Notes: Factoring Trinomials when a ≠ 1, with GCMF

QUESTIONS	NOTES:

$ax^2 + bx + c$

ax^2	___x
___x	c

STEPS to Factoring:

1. Factor out a Greatest Common Monomial
2. 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
3. Fill in box and work backwards using GCF to find factors

Examples:

$6x^2 + 60x + 144$ GCMF: _____

a = _____ b = _____ c = _____

M | S

FACTORS: _____

$2m^2 + 28m + 96$ GCMF: _____

a = _____ b = _____ c = _____

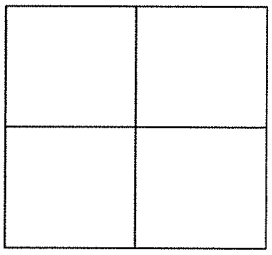
M | S

FACTORS: _____

$4r^2 - 64r + 112$ GCMF: _____

a = _____ b = _____ c = _____

M S

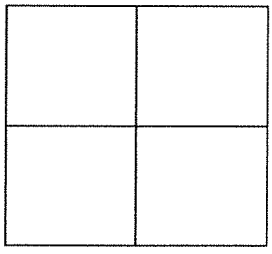


FACTORS: _____

$3v^2 - 27v - 30$ GCMF: _____

a = _____ b = _____ c = _____

M S



FACTORS: _____

Name: _____ Date: _____ Period: _____

HW: Factoring Trinomials $a \neq 1$ with GCMF

1. $2n^2 + 6n - 108$

2. $5n^2 + 10n + 20$

3. $2k^2 + 22k + 60$

4. $5v^2 - 30v + 40$

5. $2p^2 + 2p - 4$

6. $4v^2 - 4v - 8$

7. $6v^2 + 66v + 60$

8. $3b^2 + 24b + 21$

9. $7x^2 + 28x - 84$

10. $3x^2 + 33x + 30$

11. $9m^2 - 63m + 90$

12. $2c^2 - 2c - 112$