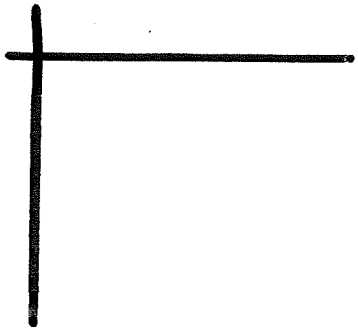
Algebra I
11.6 Worksheet #2
Trinomial Factoring

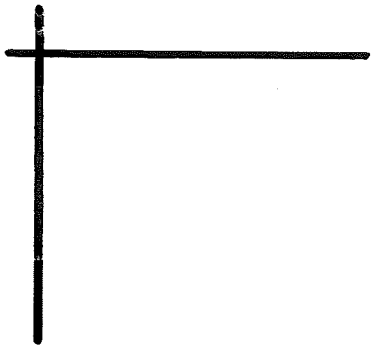
NAME:_____
DATE:_____ HOUR:____

Use algebra tiles to factor each trinomial. Make a sketch of your model.

1. $x^2 + 5x + 6$ _____



2. $x^2 - 2x - 3$ _____



this one is tricky

Factor each trinomial. If a trinomial cannot be factored, write *prime*. (3 are prime)

3. $x^2 + 5x + 4$ $(x+\ )(x+\ )$

4. $x^2 + 6x + 5$ _____

5. $c^2 - 9c + 18$ $(c-\ )(c-\ )$

6. $s^2 - 12s + 3$ _____

7. $y^2 - 2y - 3$ _____

8. $h^2 + 2h - 3$ _____

9. $r^2 - 5r - 6$ _____

10. $a^2 + 3a - 28$ _____

11. $w^2 - 19w - 36$ _____

12. $h^2 - 10h + 24$ _____

13. $z^2 - 9z + 20$ _____

14. $x^2 + 9x - 21$ _____

15. $q^2 - 8q + 15$ _____

16. $e^2 + 14e - 32$ _____

17. $t^2 - 13t - 48$ _____

18. $e^2 + 12e + 32$ _____

19. $s^2 - 21s - 100$ _____

20. $y^2 + 10y - 75$ _____

Factor each trinomial. In some cases you will need to factor out a GCF common monomial term.

21. $2x^2 + 26x + 44$ $2(x+11)(x+2)$

$2 \cdot x \cdot x + 2 \cdot 13x + 2 \cdot 2 \cdot 11$

GCF → $2(x^2 + 13x + 22)$

use sum and product rule → $2(x+11)(x+2)$

22. $3y^2 + 21y + 36$ _____

23. $2s^2 - 8s - 42$ _____

24. $5y^2 + 45y - 50$ _____

25. $3k^2 - 12k + 9$ _____ 26. $4y^2 + 12y - 160$ _____

27. $6s^3 - 36s^2 - 96s$ _____ 28. $3y^2 + 48y - 108$ _____

29. $x^3 - 6x^2 + 5x$ _____ 30. $x^3y - x^2y - 20xy$ _____

Factor each trinomial into two binomials. (no prime polynomials)

1. $x^2 + 8x + 12$ (x+6)(x+2)
2. $a^2 + 10a + 25$ (a)(a)
3. $b^2 + 9b + 14$ (b)(b)
4. $m^2 - 9m + 20$ (m)(m)
5. $k^2 - 4k - 12$ (K)(K)
6. $g^2 - 4g + 3$ (g)(g)
7. $x^2 - x - 20$ (x)(x)
8. $x^2 + x - 12$ (x)(x)
9. $r^2 - r - 6$ (r)(r)
10. $a^2 + 5a - 24$ (a)(a)
11. $p^2 - 9p + 18$ (p)(p)
12. $x^2 - 2x - 24$ (x)(x)
13. $t^2 + 3t + 2$ (t)(t)
14. $m^2 - 11m + 28$ (m)(m)
15. $x^2 + 4x - 21$ (x)(x)
16. $b^2 - 11b + 18$ (b)(b)
17. $y^2 + 12y + 20$ (y)(y)
18. $a^2 + 2a - 8$ (a)(a)
19. $v^2 - 10v + 9$ (v)(v)
20. $c^2 - 3c - 28$ (c)(c)
21. $y^2 - 8y + 16$ (y)(y)
22. $w^2 - 8w - 20$ (w)(w)
23. $m^2 + 11m + 24$ (m)(m)
24. $a^2 - 6a - 27$ (a)(a)
25. $r^2 - 16r + 48$ (r)(r)
26. $a^2 - 6a - 40$ (a)(a)
27. $w^2 - 3w - 54$ (w)(w)
28. $x^2 - x - 56$ (x)(x)
29. $t^2 - 2t - 48$ (t)(t)
30. $x^2 - 7x - 60$ (x)(x)