Algebra 1: 12.3 HW (Trinomials with a = 1) Name_____

Factoring Polynomials

Period____

Factor out the GCF for each polynomial, if possible.

1) $\frac{50k^2}{10} - \frac{40}{10} = 5k^2 - 4$

GCF = 10

$50k^2 - 40 = 10(5k^2 - 4)$

2) $40x^5 - 45x^4$

3) $-1 + 9b$

4) $63r^3 - 35r - 70$

5) $60x^4 + 36x^3 - 6x$

Factor each trinomial.

6) $b^2 + b - 12$

	b	+4
b	b^2	4
-3	-3	-12

Factors	Sum
1, -12	-11
-1, 12	11
2, -6	-4
-2, 6	4
3, -4	-1
-3, 4	1 ✓

$b^2 + b - 12 = (b-3)(b+4)$

7) $b^2 + 10b + 25$

8) $k^2 + 3k - 10$

9) $x^2 - 19x + 90$

10) $n^2 - 2n - 8$

11) $a^2 + 10a + 16$

Factor each trinomial. Remember to factor out the GCF first, if possible.

12) $\frac{6a^2}{6} - \frac{30a}{6} - \frac{84}{6} = a^2 - 5a - 14$

GCF = 6

$6(a^2 - 5a - 14)$

	a	-7
a	a^2	-7
$+2$	2	-14

Factors	Sum
$1, -14$	-13
$-1, 14$	13
$2, -7$	-5 ✓
$-2, 7$	5

$6a^2 - 30a - 84 = 6(a+2)(a-7)$

13) $3x^2 - 15x - 18$

14) $2x^2 - 10x - 12$

15) $4x^2 - 56x + 196$

16) $5v^2 + 55v + 90$