Algebra 1 Name_____

Practice Assignment #12

Date_____ Period____

Factor each completely.

1) $16k^3 + 40k^2 + 6k + 15$

$(8k^2 + 3)(2k + 5)$

2) $14x^3 - 7x^2 + 4x - 2$

$(7x^2 + 2)(2x - 1)$

3) $8r^3 + 28r^2 + 6r + 21$

$(4r^2 + 3)(2r + 7)$

4) $m^3 - 8m^2 - 7m + 56$

$(m^2 - 7)(m - 8)$

5) $10x^3 + 25x^2 + 6x + 15$

$(5x^2 + 3)(2x + 5)$

6) $2x^3 - 3x^2 + 14x - 21$

$(x^2 + 7)(2x - 3)$

7) $21x^3 + 24x^2 + 35x + 40$

$(3x^2 + 5)(7x + 8)$

8) $24x^3 + 3x^2 + 16x + 2$

$(3x^2 + 2)(8x + 1)$

9) $6k^3 - 14k^2 + 3k - 7$

$(2k^2 + 1)(3k - 7)$

10) $2n^3 - n^2 - 12n + 6$

$(n^2 - 6)(2n - 1)$

11) $32xy - 56x + 12y - 21$

$(8x + 3)(4y - 7)$

12) $xy - 5x + 8y - 40$

$(x + 8)(y - 5)$

13) $2xy - x + 10y - 5$

$(x + 5)(2y - 1)$

14) $14mn + 35m^2 - 8n - 20m$

$(7m - 4)(2n + 5m)$

15) $56xy + 64x + 7y + 8$

$(8x + 1)(7y + 8)$

16) $48n^3 + 60n^2 + 60n + 75$

$3(4n^2 + 5)(4n + 5)$

17) $4n^3 - 16n^2 + 12n - 48$

$4(n^2 + 3)(n - 4)$

18) $45x^3 - 60x^2 + 60x - 80$

$5(3x^2 + 4)(3x - 4)$

19) $60x^3 + 48x^2 + 45x + 36$

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

20) $60n^3 - 75n^2 + 80n - 100$

$5(3n^2 + 4)(4n - 5)$