Algebra 2 Name_____

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Factoring GCF's, 4 Term Polynomials, and Trinomials

Date_____ Period____

Factor each completely.

1) $12v^3 + 36v^2 + 16v + 48$

2) $56p^3b + 24p^2b - 196bp - 84b$

3) $140x^4r + 160x^3r + 105rx^2 + 120rx$

4) $192m^3 - 48m^2 + 168m - 42$

5) $168a^3 + 24a^2 - 126a - 18$

6) $18p^3 - 12p^2 + 6p - 4$

7) $42b^3 + 30b^2 + 98b + 70$

8) $42x^3 + 30x^2 - 49x - 35$

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9) $15xw - 25xk - 9yw + 15yk$

10) $20uv - 16u - 5v + 4$

11) $21au - 24av^2 + 21yu - 24yv^2$

12) $42xy - 30x + 49py - 35p$

13) $42x^3 + 276x^2 - 480x$

14) $2b^2 - 5b$

15) $6b^2 - 6b - 180$

16) $45n^2x^2 + 395nx^2 - 90x^2$

17) $4x^2 + 24x$

18) $7x^2n + 48xn + 36n$

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19) $2p^2 + 5p - 42$

20) $n^2 + 7n + 12$

21) $9r^2 - 55r + 50$

22) $24v^2 - 150$

23) $k^2n + kn - 20n$

24) $7b^3 - 32b^2 - 60b$

25) $3k^2 - 17k - 6$

26) $k^2 - 15k + 50$

27) $30x^3 - 183x^2 + 216x$

28) $60b^2 - 150b$

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Factoring GCF's, 4 Term Polynomials, and Trinomials

Date_____ Period____

Factor each completely.

1) $12v^3 + 36v^2 + 16v + 48$

$4(3v^2 + 4)(v + 3)$

2) $56p^3b + 24p^2b - 196bp - 84b$

$4b(2p^2 - 7)(7p + 3)$

3) $140x^4r + 160x^3r + 105rx^2 + 120rx$

$5rx(4x^2 + 3)(7x + 8)$

4) $192m^3 - 48m^2 + 168m - 42$

$6(8m^2 + 7)(4m - 1)$

5) $168a^3 + 24a^2 - 126a - 18$

$6(4a^2 - 3)(7a + 1)$

6) $18p^3 - 12p^2 + 6p - 4$

$2(3p^2 + 1)(3p - 2)$

7) $42b^3 + 30b^2 + 98b + 70$

$2(3b^2 + 7)(7b + 5)$

8) $42x^3 + 30x^2 - 49x - 35$

$(6x^2 - 7)(7x + 5)$

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9) $15xw - 25xk - 9yw + 15yk$

$(5x - 3y)(3w - 5k)$

10) $20uv - 16u - 5v + 4$

$(4u - 1)(5v - 4)$

11) $21au - 24av^2 + 21yu - 24yv^2$

$3(a + y)(7u - 8v^2)$

12) $42xy - 30x + 49py - 35p$

$(6x + 7p)(7y - 5)$

13) $42x^3 + 276x^2 - 480x$

$6x(7x - 10)(x + 8)$

14) $2b^2 - 5b$

$b(2b - 5)$

15) $6b^2 - 6b - 180$

$6(b - 6)(b + 5)$

16) $45n^2x^2 + 395nx^2 - 90x^2$

$5x^2(n + 9)(9n - 2)$

17) $4x^2 + 24x$

$4x(x + 6)$

18) $7x^2n + 48xn + 36n$

$n(7x + 6)(x + 6)$

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19) $2p^2 + 5p - 42$

$(2p - 7)(p + 6)$

20) $n^2 + 7n + 12$

$(n + 3)(n + 4)$

21) $9r^2 - 55r + 50$

$(r - 5)(9r - 10)$

22) $24v^2 - 150$

$6(2v + 5)(2v - 5)$

23) $k^2n + kn - 20n$

$n(k + 5)(k - 4)$

24) $7b^3 - 32b^2 - 60b$

$b(7b + 10)(b - 6)$

25) $3k^2 - 17k - 6$

$(3k + 1)(k - 6)$

26) $k^2 - 15k + 50$

$(k - 10)(k - 5)$

27) $30x^3 - 183x^2 + 216x$

$3x(2x - 9)(5x - 8)$

28) $60b^2 - 150b$

$30b(2b - 5)$

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