

Name \_\_\_\_\_

Alg1 Q3 Test 3 Review

Test: Tuesday, March 15, 2016

Due: March 14, 2016

Factoring

***GCF: Write each polynomial below as a factored expression involving the GCF of the polynomial. You then check your answer by distributing the GCF. YOU MUST CHECK!!!!***

(1)  $6x^2 + 10x$

(2)  $18x - 99$

(3)  $24x^2 - 54x$

$2x(3x + 5)$

Check:

$2x(3x + 5)$

$6x^2 + 10x$

(4)  $8x^2 + 32x + 88$

(5)  $30x^3 - 60x^2 + 6x$

(6)  $42x^4 - 70x^3 - 14x^2$

***Rewrite each of the following expressions as the product of two binomials by factoring out a common binomial factor. Watch out for the subtraction problems (b, c, and d)***

(7)  $(x + 7)(x + 12) + (x + 5)(x + 12)$

(8)  $(3x - 4)(2x - 3) - (2x - 3)(5x - 8)$

(9)  $(7x - 11)(x - 6) - (x - 6)(4x + 6)$

(10)  $(2x + 7)(5x - 8) - (2x + 7)(7x + 8)$

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***Factor using your knowledge about the Difference of Two Squares (D.O.T.S.):***

11)  $x^2 - 121$

12)  $9x^2 - 16$

13)  $49x^2 - 1$

14)  $x^2 - y^2$

15)  $4a^2 - 81b^2$

16)  $144a^2 - b^2$

17)  $196x^2 - 25$

18)  $225x^2 - 121$

19)  $9x^2 - 400$

20)  $64x^2 - 169y^2$

21)  $36x^2 - 289y^2$

22)  $100c^2 - d^2$

***Factor each trinomial into the product of two binomials:***

23)  $x^2 + 13x + 36$

24)  $x^2 - 4x - 32$

25)  $x^2 - 19x + 88$

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26)  $x^2 + x - 56$

27)  $x^2 - 8x - 84$

28)  $x^2 + 27x + 72$

29)  $x^2 - 24x + 144$

30)  $x^2 + 13x - 48$

31)  $x^2 - 21x + 80$

32)  $x^2 + 18x + 80$

33)  $x^2 + 3x - 108$

34)  $x^2 - 33x - 108$

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*Same rules, same steps, more difficult problems!!! Enjoy, little homies!!!*

37)  $4x^2 - 16x + 7$

38)  $8x^2 + 22x + 5$

39)  $6x^2 - 5x - 10$

40)  $9x^2 + x - 8$

41)  $12x^2 - 13x + 3$

42)  $16x^2 - 2x - 3$

43)  $4x^2 + 7x - 36$

44)  $14x^2 + 37x + 5$

45)  $10x^2 - 27x + 5$