

Name: _____

Period: _____

Algebra 1

Chapter 8 Part 2: Quadratic Expressions and Equations

Targets	Learning Targets	SQ Scores	List of problems to ask about:
T8-4	I can factor polynomials using the GCF (distributive property).		
T8-5	I can factor trinomials and binomials with a leading coefficient of one using any method.		
T8-6	I can factor trinomials and binomials with a leading coefficient greater than one using any method		
T8-7	I can use factoring and the zero product property to solve quadratic equations.		
T8-0	Computational Fluency – I can recite aloud the squares and square roots of the numbers 1-20.		

Target	Lesson/Activity	Homework Assignment o = only do odd problems	Finished? 1pt per stamp
4/20	Ch 8 Part 1 Test	Greatest Common Factor (GCF) WS	
4/22 T8-4	8.5 Greatest Common Factor Using the Distributive Property	8.5 Factoring by using GCF WS	
4/24 T8-5	8.6 Factoring $a < 1$	8.6 Pg. 507 #1-4all, 12-19all, 31, 41, 60 Extra stamp for problem #40!	
4/28 T8-6	8.7 Factoring by Grouping	8.7 Factoring by Grouping WS	
4/30 T8-6		Stamp for Factoring Connect Four Participation 8.7 Pg. 513 #10-22all	
5/4 T8-6	8.8 Difference of Squares 8.9 Perfect Squares	8.8 Pg. 519 #15-29o, <u>57</u> 8.9 Pg. 527 #23-33o, 81,83	
5/6 T8-7	Zero Product Property Solving by Factoring	Factoring (to solve) WS	
5/8	ART/Review	Review Pg 532 #35-63o, 64, 65-83o	
5/12	Chapter 8 Test Part 2	**You need 5 Stamps to be able to Retake **	

Helpful Videos Ch 8 Part 2
Search by the name of section/target topic
at www.khanacademy.org

Retake Problems for Ch. 8 Part 1

T8-1	Retake WS
T8-2	Retake WS
T8-3	Retake WS

Algebra 1**Unit 8 Factoring by Using the GCF Worksheet**

For each problem below, factor by finding the GCF.

1) $2a^4 + 8a$	2) $5x^3 - 10$
3) $8ab^2 - 12a^2b^3$	4) $10c^3d^2 - 15cd^3$
5) $15f - 20g^2$	6) $3y^4 + 9y^2 - 15$
7) $10d^7 + 2d^5$	8) $7w^5 - 35w^2$
9) $2x + 2y$	10) $-32y^2 - 24y$
11) $6x^2yz + 2xy^2z - 4xyz$	12) $12a^4b^3c^2 - 4a^3bc^2 + 8a^2c - 16ab$

Review – Multiply and simplify.

13) $(2x-9)(x+4)$	14) $(x-4)(2x^2-3x+5)$
15) $(3x+10)^2$	16) $(7x-8)(7x+8)$

Review – Add or subtract.

17) $(x^3-2x^2+8x-4)+(x^2+9x-7)$	18) $(5x^2-4)-(8x^2+3x-9)$
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Review – Write the polynomial in standard form, then tell what type the polynomial is.

19) $5x^2-8-2x^4$	20) $4+2x^3$
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Verification: Write your answers to #1-12 in each box. Perform the Distributive Property.
Do your answers match the original problems given?

1.	2.
3.	4.
5.	6.
7.	8.
9.	10.
11.	12.

8.7 Factoring by Grouping WS

Factor each polynomial by grouping, if possible. If the polynomial cannot be factored using integers, write *prime*.

1. $a^2 + 10a + 24$

2. $2x^2 + 5x + 2$

3. $h^2 + 12h + 27$

4. $2t^2 + 9t - 5$

5. $g^2 - 2g - 63$

6. $3g^2 - 7g + 2$

7. $w^2 + w - 56$

8. $2t^2 - 11t + 15$

9. $3n^2 + 5n + 2$

10. $n^2 - 3n - 28$

8.7 Factoring WS continued

Factor by Grouping w/GCF

Factor each polynomial by first factoring out GCF, then factor by grouping.
If the polynomial cannot be factored using integers, write *prime*.

11. $12x - 45 + 9x^2$

12. $24x^2 + 108x - 60$

13. $70b^2 + 98b - 84$

14. $12x^2 - 14x - 6$

15. $60y^2 + 180y + 135$

16. $2x^2 + 4x + 2$

17. $18t^2 - 78t - 90$

18. $80h^2 - 88h - 48$

19. $8x^2 + 8x - 16$

20. $21b^2 + 7b - 70$

NAME _____

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PERIOD _____

Factoring (to solve) WS

Solve each equation.

1. $(x + 4)(x - 3) = 0$

2. $x(x + 12) = 0$

3. $4x(x + 2)(3x - 5) = 0$

4. $(x - 9)^2 = 0$

5. $15n^2 - n = 2$

6. $12k^2 + 15k = 16k + 20$

7. $x^2 - 6x + 6 = -3$

8. $9z^2 = -6z + 15$

9. $4y^2 = 81$

10. $64p^2 = 9$

11. $98b^2 - 50 = 0$

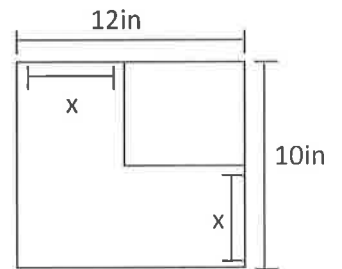
12. $-9 - 8x + x^2 = 0$

13. GEOMETRY The length of a garden is 20 feet greater than its width. What are the dimensions? Draw a picture.

- Write an expression for the area of the garden.
- Find the dimensions of the garden if it has an area of 300 square feet.

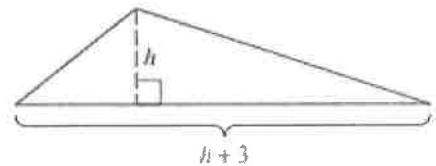
14. WEB DESIGN Janeel has a 10-inch by 12-inch photograph. She wants to scan the photograph, then reduce the result by the same amount in each dimension to post on her Web site. Janeel wants the area of the image to be one eighth that of the original photograph.

- Write an equation to represent the area of the reduced image.
- Find the dimensions of the reduced image.



15. TRIANGLE The area of a triangular sheet of paper is 14 square inches. One side of the triangle is 3 inches longer than the height. Find the length of the one side and the length of the height.

- Write an equation to represent the area of the triangle.
- Find the height and side length of the triangle.



16. FLOOR The room that is shown in the figure below has a floor space of $2x^2 + x - 15$ square feet. Find the length and width of the room.

