Distance Learning: Week of 27 April & 4 May 2020:

Assignments are accessible through YouTube videos. I will post the YouTube url's each day through the Remind app. You can also receive them by e-mail. Work can be submitted through Remind and e-mail, which I highly encourage. You can sign up for Remind by texting the message @whet-alg1 to the number 81010. You can also contact me through e-mail at swhetstone@tusd.net.

My office hours are 10 am – 12 pm, M–F. You can contact me with questions either through Remind or by e-mail. Please check your Remind messages regularly.

Topic: Factoring quadratic expressions & solving quadratic equations

Monday: 27 April 2020

> Lesson 21.1
> OTL#143
> > pg. 993-995, #18, 20, 21, 22, 24

Tuesday: 28 April 2020

> Lesson 21.2
> OTL#144
> > pg. 1,006-1,007, #17, 19-24

Wednesday: 29 April 2020

> Lesson 21.3
> OTL#145
> > pg. 1,018-1,019, #3-18

Thursday: 30 April 2020

Lesson 21.3
OTL#146
   pg. 1,020-1,023, #19-27

Friday: 1 May 2020

Module 21 Review
OTL#147
   Module 21 Review worksheet (see below), #1-24

Monday: 4 May 2020

Lesson 22.1
OTL#148
   pg. 1,039-1,040, #1-15

Tuesday: 5 May 2020

Lesson 22.1
OTL#149
   pg. 1,041-1,043, #16-24

Wednesday: 6 May 2020

Lesson 22.2
OTL#150
   Completing the Square for $x^2 + bx + c$ worksheet (see below), #1-22

Thursday: 7 May 2020

Lesson 22.2
OTL#151
   Completing the Square for $ax^2 + bx + c$ worksheet (see below), #1-10

Friday: 8 May 2020

Lesson 22.1/22.2
OTL#152
   Solving Quadratic Equations (Lesson 22.2 Day 3) worksheet (see below), #1-18

Other resources that can help are…

Khan Academy videos on factoring quadratic expressions & solving quadratic equations.

YouTube videos on factoring quadratic expressions & solving quadratic equations.

"Algeomulus Prep. Academy" videos (West High student-made!!).
https://youtu.be/M2Y1lSB1vaE

Algebra 1   **DO NOT WRITE ON THIS FORM!!**

Module 21 Review   **SHOW ALL WORK ON SEPARATE PAPER!!**

Solve.

1. $-3(3x+2)(6x-5)=0$

2. $(12-x)(4+3x)=0$

Factor each completely.

3. $x^2-13x+40$

4. $112x^2+40x-4$

5. $81g^2-9h^2$

6. $x^2-7x-30$

7. $k^2+16k+64$

8. $5x^2-18x+9$

9. $16x^4-1$

10. $9y^2-89y-10$

11. $3g^3-21g^2-132g$

12. $x^2-4x-21$

Solve each equation.

13. $x^2-23x-50=0$

14. $75k^2+30k=-3$

15. $5x^2-3x+14=4(2x+3)$

16. $4(x^2+4x)=48$

17. $2g^2=13g-15$

18. $9(y^2-4)=-20$

19. $p^2-15p+94=5p-6$

20. $5x^2-20=0$

Solve each modeling situation.

21. The area of a square, in square meters, is represented by $16x^2+24x+9$.
    a) Find an expression for a side length of the square.

    b) Find the perimeter of the square when $x=6$.

22. You are planning to put a stone border along two sides of a rectangular Japanese garden that measures 6 yards by 15 yards. Your budget limits you to only enough stone to cover 46 square yards. If x is the width of the stone border, then the equation that models this situation is given by $(x+15)(x+6)-(15)(6)=46$. How wide should the stone border be?

23. You jump off the high dive platform at a city pool, which is 12 feet above the water, with an initial upward velocity of 4 feet per second. How long will it take you to enter the water?

24. An acrobat is shot out of a cannon and lands in a safety net that is 10 feet above the ground. Before being shot out of the cannon, she was 4 feet above the ground. She left the cannon with an initial upward velocity of 50 feet per second. Find the time it takes for her to reach the net. Explain why only one of the two solutions is reasonable.

OTL# ____ Completing the Square for $x^2 + bx + c$ **SHOW ALL WORK!!**

Complete the square for each quadratic expression in order to form a perfect square trinomial. Then factor it into a binomial squared.

1. $x^2 + 8x$

2. $x^2 - 6x$

3. $x^2 - 12x$

4. $x^2 + 18x$

5. $x^2 + x$

6. $x^2 + 7x$

7. $x^2 - 5x$

8. $x^2 - 11x$

9. $x^2 + 15x$

10. $x^2 + \frac{1}{2}x$

11. $x^2 + \frac{3}{4}x$

12. $x^2 - \frac{5}{3}x$

Solve each quadratic equation by completing the square.

13. $x^2 - 16x + 55 = 0$

14. $x^2 - 10x - 22 = 0$

15. $x^2 + 2x - 50 = 5$

16. $x^2 - 6x - 20 = 3$

17. $x^2 + 9x + 22 = 2$

18. $x^2 - 5x - 63 = -8$

19. $x^2 + 5x + 3 = -x + 12$

20. $x^2 - 84 = 4x$

21. $x^2 + 7x = -x + 56$

22. $x^2 + 5x - 10 = 10x + 4$

Algebra 1

OTL# _____ Completing the Square for $ax^2 + bx + c$

Solve each quadratic equation by completing the square.

1. $6x^2 - 12x - 90 = 0$

2. $9x^2 - 18x + 8 = 0$

3. $6x^2 + 12x - 48 = 6$

4. $4x^2 + 16x + 5 = -10$

5. $10x^2 + 20x - 26 = -4$

6. $7x^2 + 14x - 55 = -6$

7. $5x^2 = 56 + 6x$

8. $8x^2 = 9 + 14x$

9. $10x^2 + 4x - 17 = 5$

10. $4x^2 + 8x = -4x + 66$

Solve the quadratic equation using the indicated method.

Solve by factor.

1. $x^2 + 14x + 48 = 0$

2. $x^2 - 11x + 30 = 0$

3. $2x^2 = -15x - 25$

4. $8x^2 - 3 = 5x$

5. $6x^2 - 24x = 60 + 2x$

6. $10x^2 - 21 = -20x - 5 + 4x^2$

Solve by taking square roots.

7. $49x^2 - 25 = 0$

8. $x^2 + 1 = 46$

9. $10x^2 - 4 = 496$

10. $64x^2 - 2 = 98$

11. $(x-5)^2 + 3 = 27$

12. $3(x+2)^2 - 5 = 15$

Solve by completing the square.

13. $x^2 + 10x - 75 = 0$

14. $x^2 + 14x + 25 = -10$

15. $x^2 + 19 = 9x$

16. $x^2 = 5x + 50$

17. $10x^2 - 20x = 22$

18. $3x^2 = -4x + 39$