<table>
<tr><td>

Teacher: <mark>Mr. Whetstone</mark>

Class: Algebra 1

Periods: 1, 3, and 6

Assignment: Week of 11 May

           & 18 May

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If turning in paper packet and work, make sure to include this header information on all pages!

From the Student:

Student Name

Teacher Name

Name of class

Period #

OTL #

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Distance Learning: Week of 11 May & 18 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: Solving quadratic equations

Monday: 11 May 2020

    Lesson 22.2
    OTL#153
        pg. 1,054-1,057, #6-16 (evens), 18-20 (all), 23

Tuesday: 12 May 2020

    Lesson 22.3
    OTL#154
        pg. 1,068-1,069, #9-14

Wednesday: 13 May 2020

    Lesson 22.3
    OTL#155
        Discriminant Test worksheet (see below), #1-10

Thursday: 14 May 2020

Lesson 22.3
OTL#156
Standard Form to Vertex Form worksheet (TBD)

Friday: 15 May 2020

Lesson 22.3
OTL#157
Quadratic Equations & Functions (Lesson 22.3 Day 4) worksheet (see below), #1-16

Monday: 18 May 2020

Lesson 22.3
OTL#158
pg. 1,069-1,071, #15-22

Tuesday: 19 May 2020

Lesson 22.4
OTL#159
pg. 1,082-1,084, #1-21 (odds)

Wednesday: 20 May 2020

Lesson 22.4
OTL#160
pg. 1,082-1,084, #2-22 (evens)

Thursday: 21 May 2020

Module 22 Review
OTL#161
Module 22 Review worksheet (see below), #1-26

Friday: 22 May 2020

Module 19-Module 22
OTL#162
Module 19-Module 22 Review worksheet (TBD)

Other resources that can help are…

Khan Academy videos on solving quadratic equations.

YouTube videos on solving quadratic equations.

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

Discriminant Test

Use the discriminant to tell how many real solutions each quadratic equation has. If there are real solutions, solve the equation.

1. $5x^2 + 2x = 51$

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

3. $x^2 - 24 = 4x$

4. $x^2 + 6x = -9$

5. $8x^2 + 12 = -11x$

6. $8x^2 - 23 = 8x$

7. $3x^2 - 48 = -10x$

8. $3x^2 = -7 + 8x$

9. $5x^2 + 9x = 72$

10. $9x^2 + 25 = 30x$

Algebra 1   **Quadratic Equations & Functions (Lesson 22.3 Day 4)**

Solve each equation by completing the square.

1. $x^2 + 10x = -24$

2. $x^2 = 20x - 57$

3. $4x^2 - 33 = 16x$

4. $6x^2 - 18x = -3$

Solve each equation with the quadratic formula.

5. $5x^2 - 16 = -11x$

6. $4x^2 = 5 + 4x$

7. $x^2 - 2 = -8x$

8. $11x^2 + 12x = -2$

Rewrite each function from standard form to vertex form. Then identify the vertex.

9. $f(x) = -x^2 + 6x - 13$

10. $f(x) = 2x^2 - 12x + 17$

11. $f(x) = -2x^2 - 6x - 3$

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

Find the discriminant. Tell the number of real solutions. If there are real solutions, solve the equation.

13. $3x^2 = 11x - 8$

14. $8x^2 - 6x = -7$

15. $x^2 = 22 + 6x$

16. $4x^2 = -9 + 12x$

Solve each equation using square roots. Leave answers in simplest form.

1. $-3x^2 + 2 = -25$ **2.** $-2(x-1)^2 + 15 = -3$

3. $(x+5)^2 - 6 = 43$ **4.** $-7x^2 + 20 = 20$

5. $(x-14)^2 + 13 = 14$

Find the discriminant of each equation. Determine the number of real solutions of the equation.

6. $3x^2 - 10x - 2 = 0$ **7.** $x^2 + 4x + 11 = 0$

8. $4x^2 - 49 = 0$ **9.** $2x^2 + 8x - 15 = 0$

10. State the quadratic formula. *(Memorize this formula!!)*

Solve each equation using the quadratic formula. Leave answers in simplest form.

11. $2x^2 - 6 = 5x$ **12.** $2x^2 + 16x = -40$

13. $3x^2 - 16 = 11x$ **14.** $3x^2 - 4x - 39 = 0$

15. $-2x = x^2 - 10$

Solve each equation using any method we have learned. Leave answers in simplest form.

16. $x^2 - 11x = -28$ **17.** $4x^2 - 100 = 0$

18. $2x^2 - 4x - 3 = 0$ **19.** $x^2 - x = 6$

Solve each equation by completing the square. Leave answers in simplest form.

20. $x^2 = 14 - 2x$ **21.** $10x^2 - 20x = 35$

22. $9x^2 = 18x - 5$ **23.** $4x^2 - 20x = 56$

Solve each problem using any method we have learned. Write answers to the nearest 100th.

24. A rectangle has a length which can be written as the expression $x+5$ and a width written as the expression $x+8$. If the area of the rectangle is 225 square feet, find the length and width of the rectangle. Then find the perimeter of the rectangle.

25. The center fielder of a baseball team throws a baseball from the outfield to the second baseman. He can throw the ball with an upward velocity of 40 feet per second from a height of 5 feet. If the second baseman must jump to catch the ball 12 feet in the air, how long was the ball in the air?

26. A catapult launches a large stone with an upward velocity of 35 meters per second from a height of 4 meters. How long will the stone be in the air before it hits the ground?