Algebra II Honors
Summer Assignment

Please read carefully and complete the following packet over the summer.

The packet targets skills learned in previous math courses that are prerequisites for this course. Find and use online resources to help with any topics you are having difficulty with. This assignment will be graded. Please give it the attention it deserves and make sure it represents your best work.

- **Clearly state all answers.**

- **All answers must be expressed in simplest form or simplest terms.**

- **You are responsible to know all <u>formulas</u> needed within this packet.**

- **This packet must be completed <u>WITHOUT</u> the use of a calculator.**

- **You must show all work and necessary steps for each question; be detailed.**
  - ➔ **No WORK, No CREDIT!**

Students are required to know how to perform mathematical operations with 2-, 3- and 4-digit numbers, decimals and fractions without a calculator.

<u>Due</u>: First Week of Math Class in September
Thursday, September 4th or Friday, September 5th

This will be a quiz grade.
2 points will be deducted each <u>day</u> the assignment is late.
The assignment will earn a zero if more than a week late.

HAVE A GREAT SUMMER!

Algebra II Honors
Name_____

Summer Assignment

Simplify.

1) $\sqrt{18}$

2) $\sqrt{150}$

3) $10\sqrt{405}$

4) $6\sqrt{63}$

Find the slope of the line through each pair of points.

5) $(16, -5), (-12, 16)$

6) $(15, 13), (-5, -19)$

-1- Made with Infinite Algebra 1.

Combine. Express in simplest form.

7) $-\dfrac{17}{5} + \dfrac{13}{8}$

8) $\dfrac{1}{8} + \left(-\dfrac{12}{7}\right)$

9) $-\dfrac{3}{4} + \dfrac{11}{5}$

10) $-\dfrac{7}{4} - \dfrac{11}{7}$

Find the midpoint of the line segment with the given endpoints.

11) $(12, -12),\ (-8, -12)$

12) $(-13, -3),\ (-2, -3)$

Find the distance between each pair of points. Express in simplest radical form.
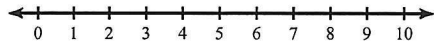
13) $(-4, 6),\ (3, -1)$

14) $(-2, 6),\ (-4, 2)$

Solve each equation.

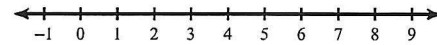15) $-8p - 8p = 7(5 + p) - 4(5p - 4)$

16) $\dfrac{2r + 10}{r + 8} = \dfrac{10}{7}$

Solve each inequality and graph its solution.

17) $-40 - 8x > 3(3 - 7x) + 3$

18) $5(-4r + 5) \geq 3 - 2(2r - 3)$

Factor each completely.

19) $p^2 - 100$

20) $b^2 - 7b$

21) $44x^3 - 48x^4 + 16x^5$

22) $x^2 + 26x + 169$

23) $x^2 + 3x - 54$

24) $5b^2 - 9b + 4$

25) $15p^2 - 12p$

26) $6x^2 + 4x - 10$

27) $4b^2 - 22b + 24$

28) $16k^4 - 25$

Simplify each expression. Anwers cannot contain negative exponents.

29) $\dfrac{60n^4}{48n^2}$

30) $\dfrac{16m}{32m^5}$

Solve each equation with the quadratic formula. Express in simplest form.

31) $9p^2 + 10p - 1 = 0$

32) $x^2 + 8x + 4 = 0$

Solve each system by substitution.

33) $4x + 7y = 6$
$-8x + y = 18$

Solve each system by elimination.

34) $10x + 7y = 25$
$-8x - 5y = -17$