Algebra II Summer Work

***Please read all the directions below. It tells you everything you need to know.**

- Students will be given summer work, which will include simplifying expressions, evaluating expressions, and solving equations associated with the Real Number system.
- I will be holding 2 help sessions: Monday (8/21) and Tuesday (8/22), both from 9:00-12:00 at school (usually in the library). If you cannot attend either of these but would like some assistance, please e-mail me at andrew.girouard@portlanddiocese.org Even if you've completed the assessment and you'd like it to be checked, I will go over it with you and give you the opportunity to correct any mistakes. I have teacher in-service days that Wednesday and Thursday, and I don't know my availability, yet.
- ***All work must be shown.*** NO CALCAULATORS!!!!! Otherwise, you will not get full credit.
- **This assessment will be turned in on the first day the class meets** and will be counted as a Quiz grade.
- Name, Date, Period, assignment in the **top right-hand corner**. **Do the assignment on loose leaf paper!!!! When finished, please staple this sheet to it!!!!**
- Here are some math manners that you should follow:
    - Simplify fractions. DO NOT TURN THEM INTO DECIMALS! (It can be a top-heavy fraction instead of a mixed number)
    - Keep fraction bars straight, not diagonal.
    - Don't leave negatives in the denominator.
    - Leave your answer in simplest form.
    - When solving equations, your answer should be written as "(variable) Ɛ { }" (which is read "[variable] element set [answer]"). So it may look something like *x* Ɛ { }, or whatever the variable of the equation is.
    - Use graph paper and a ruler for the graphs.
- Help comes in a lot of different forms. However, PhotoMath is NOT one of them…the same goes for having someone "help" you by DOING the problem for you or having them just TELL you what to do. None of these "help" methods make you THINK about what to do in the problems. Thinking is going to be a large part of class this year.
- Again, if you have any questions, please feel free to e-mail me at andrew.girouard@portlanddiocese.org

I. Simplify each expression.

1. Expand and simplify: a) -3^2 b) $(-3)^2$
2. $3x - 5$, when $x = 6$
2. 3. $\frac{x+y}{x-y}$, when $x = 8$ and $y = -2$
4. $5x - 9x$
5. $2(5 - 3x) - 7(2x - 1)$
6. $3a^2 - 2b - 8a^2 + 10b$
7. $\frac{2}{3} \cdot \frac{4}{5}$
8. $\frac{2}{3} \div \frac{4}{5}$

II. Solve each equation, if possible.

9. $-16k = -8$
10. $-3p + 4 = 13$
11. $\frac{3}{11}b + 5 = 5$
12. $6x + 7 = 2x + 59$
13. $6 - 5g = g + 9$
14. $-4(n + 7) = 3(n - 4)$
15. $\frac{2}{3}h - \frac{1}{12} = h + \frac{1}{8}$
16. $1.7(x + 5) = 2.1x + 9.7$
17. $4(3x - 6) = 3(4x - 8)$
18. $5(2x + 4) = 10(x - 2)$

III. Identify the slope between the given pair of points. Then identify whether the line would go up from left to right, down from left to right, be horizontal, or vertical.

19. $(4, -9), (-6, 2)$
20. $(6, -7), (6, 0)$
21. $(-2, -8), (1, 0)$

IV. Graph the equation of the line. Identify the slope and *y*-intercept. Make a chart with at least 3 points.

22. $y = 3x - 2$
23. $3x + 2y = 6$
24. $y = 3$
25. $x = -2$