IC CATHOLIC PREP

Supplies for A2TH

- **3 or 5 subject notebook for class notes**
- **separate notebook for homework (optional) or pack of paper**
- **pencils**
- **graphing calculator TI-84**

ALGEBRA 2 TRIGONOMETRY HONORS
SUMMER REVIEW

This packet contains problems that we as a mathematics department feel you should know from pervious math courses. It is important that you review these problems as they will appear throughout this course. We feel this will give you an advantage when beginning Algebra 2 and it will guide your teacher as to what you know and what you may need extra help on.

- Must be completed by the 1st day of school
- Begin working on this in early August
- Look in old books or your Algebra 2 book for help
- Show work
- CALCULATORS NOT ALLOWED
- You will be tested on this material the first few weeks of school

THIS IS DUE THE FIRST DAY OF SCHOOL

A2TH Name: _____

Summer Review

MUST SHOW ALL WORK

PART 1: Real Number System

I. Graph the elements of the set on a number line.

1. $\left\{\frac{-3}{2}, \frac{-11}{3}, \frac{5}{4}\right\}$

II. Simplify each by finding the absolute value.

2. $-|22|+|-8|-|5|$

III. Simplify each expression. Use the order of operations.

3. $\left(-\frac{5}{4}-\frac{2}{3}\right)+\frac{1}{6}$

4. $\frac{\left(-9+\sqrt{16}\right)\left(-3^2\right)}{-4-1}$

IV. Write each expression using exponents.

5. -3 to the fourth power

6. $a \cdot a \cdot a \cdot a \cdot a \cdot a$

V. Evaluate each expression.

7. $\left(\frac{1}{5}\right)^3$

8. -4^2

VI. Evaluate the expression if $a = -3$, $b = 64$, and $c = 6$

9. $\frac{3c + a^2}{2b - 6c}$

VII. Simplify each expression.

10. $-4 + 4(4k - 3) - 6(2k + 8) + 7$

PART 2: Linear Equations and Inequalities.

I. Solve the equation.

1. $\frac{3x}{4} + \frac{5x}{2} = 13$

2. $P = 2(L + W)$ *solve for* W

II. Translate each verbal phrase or sentence into a mathematical expression or equation. Use x to represent the unknown number.

3. Twice a number, decreased by 13

4. 12 increased by three times a number is 6.

III. Solve each inequality and graph the solution on a number line.

5. $x + 4(2x - 1) \geq x$

6. $4 \leq -2x + 3 < 8$

7. $x + 1 > 3$ *or* $-4x + 1 > 5$

IV. Solve the absolute value equation or inequality.

8. $|2x + 5| = 14$

9. $|-3 + x| > 8$

10. $|3x - 1| \leq 11$

PART 3: Graphs, Linear Equations, and Functions

I. Graph each equation.

1. Find the x- and y-intercepts.

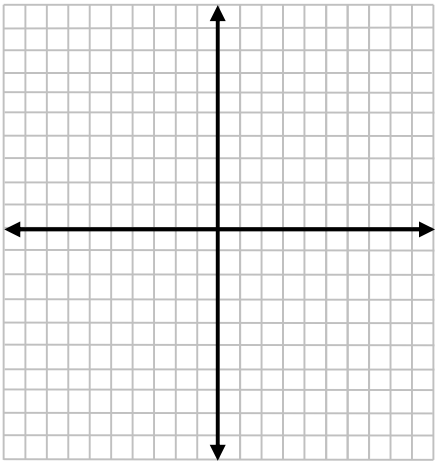
$-2x+3y=12$

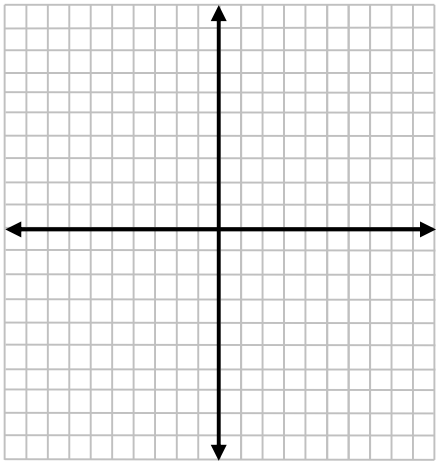
2. Find the slope and y-intercept.

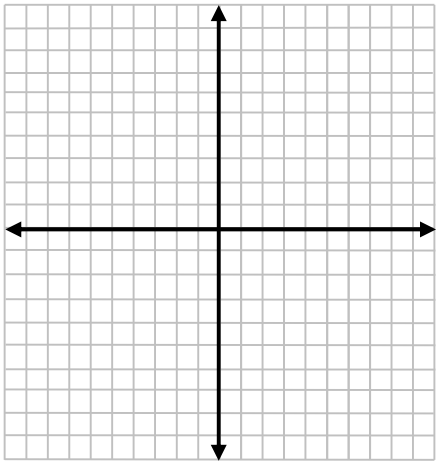
$y=-\frac{5}{2}x+5$

3. Make a table.

$x+4=0$







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

4. (2, 4) and (-4, 4)

III. Write the equation in slope-intercept form with the given information. ($y=mx+b$)

5. Through (5, 8) and $m=-2$

6. Through (3, 8) and vertical

7. (5, -2) and (-3, 14)

8. Through (7, 2) parallel $3x - y = 8$

IV. Graphing inequalities and compound inequalities.

9. $x - 3y < 0$

10. $x + y < 1 \text{ and } x \geq 1$