Name: _____

SUMMER ASSIGNMENT
for students entering
Advanced or Honors Geometry

OVERVIEW:
The problems in this packet address **prerequisite** Algebra 1 skills. These are concepts which you should **understand fully** on your own ***before*** entering Advanced or Honors Geometry. If you need a refresher, please use the links or QR codes provided. If you have difficulty or any gaps in your knowledge, you may wish to reconsider your placement at this level. Please contact your guidance counselor with any concerns.

DIRECTIONS:
- **This packet is due on the first day of school.**
- All problems should be done or well-attempted. No problems should be left blank.
- Show work on every problem in the space provided.
- Write neatly in pencil and box your final answers.
- Express all answers in exact, simplest form. (This means answers should not be written as repeating or rounded decimals; they should be written as fractions and square roots.)
- You should not work together with other students nor receive extensive help from a tutor.
- An answer key will be shared with you the first week of school.

ASSESSMENT:
- During the first week of school, your teacher will inform you how this packet will be used as a first quarter assignment.
- You are responsible for knowing the material covered in this packet.

CALCULATOR INFORMATION:
- Please purchase a **TI-84 Plus graphing calculator**.
- You will need it in this class, as well as all subsequent high school and college courses.
- Bring it to class each day fully charged! (Just like your Chromebook!)

We look forward to meeting you in September!

Link to Videos on Factoring

FACTORING

Factor each expression completely. Decide which method(s) to use.

For extra help, watch the instructional videos from Khan Academy. Scan the QR code or click the link.

1. $x^2 - 7x + 6$
2. $x^2 - 2x - 24$
3. $x^2 + 5x - 24$

4. $2r^2 - 3r - 20$
5. $6x^2 - 5x - 6$
6. $25y^2 - 1$

7. $3x^3 - 12x$

8. $y^3 + 2y^2 - 81y - 162$

9. $15x^3 - 10x^2 + 3x - 2$

SOLVING EQUATIONS

Solve each equation.

For extra help, watch the instructional videos from Khan Academy. Scan the QR code or click the link.

Link to Videos on Solving Equations

10. $5a + 2a - 6 = 4a - 5$

11. $x + 5 = \frac{1}{3}(6x - 5)$

12. $\frac{8 - 5r}{6} = 3$

13. $\frac{y + 4}{y - 1} = -\frac{4}{3}$

14. $2n^2 - 50 = 0$

15. $3x^2 + x = 24$

16. $(x - 4)^2 - 5x = 0$

17. $\frac{x-4}{2x-7}=\frac{x+4}{3x+7}$

18. $\frac{6-m}{m}=\frac{m-6}{2}$

SYSTEMS OF LINEAR EQUATIONS

Solve each system of linear equations.

For extra help, watch the instructional videos from Khan Academy. Scan the QR code or click the link.

Link to Videos on Solving Systems

19. $\begin{cases} x = y - 11 \\ x - 3y = 1 \end{cases}$

20. $\begin{cases} 6x - 5y = 9 \\ 9x - 7y = 15 \end{cases}$

21. $\begin{cases} 3x - y = -6 \\ x = -1 \end{cases}$

22. $\begin{cases} 4x - 5y = 18 \\ 3x + 10y = -3 \end{cases}$