ALGEBRA I
Summer Assignment

Welcome to **Algebra 1**! This review assignment is designed to refresh your pre-algebra skills. It includes information that was taught in previous courses and will be used throughout the upcoming school year. As you prepare, you may need to seek help by accessing the suggested resources or links provided.

IMPORTANT: Read this page first...

INSTRUCTIONS

1. Complete all sections and problems in this packet on your own.
2. Make sure to show ALL your work to earn credit.
3. Complete the entire packet without a calculator.
4. You may use your notes from previous math courses to help you complete the packet.

PACING

You should pace yourself to work on this assignment at least a few hours a week leading up to the start of school in September. If you complete the packet at the end of June or early in July, it will not be very helpful in preparation for the start of school. Also, it will not be helpful if you try to complete the entire packet a night or two before school starts. Pace yourself by setting a calendar reminder and scheduling blocks of time to focus on this assignment as you prepare to return to school in September.

GRADING

- On the first day of school, your math teacher will check for full completion of this Summer Assignment and the supporting work for your responses (no work = no credit). This part will be weighted at 50% - this is the grade that represents your effort and following of directions.
- Your teacher will then review the assignment and provide remediation as needed.
- Upon completion of your teacher's review, you will be given an assessment (a "test") based on the topics covered in this assignment. This assessment will be weighted at 50% - this is the grade that represents your mastery of the skills.
- The two weighted scores combined will count as one project grade for the 1st trimester.
- Acceptance of late assignments will be limited and subject to point deductions.

We are looking forward to meeting you in September.
Go Bulldogs!

RESOURCES & REFERENCE MATERIALS

https://www.khanacademy.org/
https://www.mathsisfun.com/
https://artofproblemsolving.com/videos/prealgebra
http://patrickjmt.com/

A. OPERATIONS WITH REAL NUMBERS – Evaluate. Simplify all answers.

1. $-7 + -2$	**2.** $-11.4 + 3.8$	**3.** $4.5 + (-10.2)$
4. $-53 - (-13)$	**5.** $96 - (-15)$	**6.** $-72 - 18$
7. $-\frac{4}{9} + 1\frac{4}{5}$	**8.** $\frac{3}{2} - \frac{9}{7}$	**9.** $(-2)\left(-\frac{8}{7}\right)$
10. $42 \div -6$	**11.** $\frac{3}{5} \div \frac{5}{6}$	**12.** $2\frac{2}{3} \cdot \frac{6}{11}$

B. SIMPLIFY FRACTIONS – Simplify the following fractions.

1. $\frac{5}{10}$	**2.** $\frac{-4}{-16}$
3. $1\frac{18}{24}$	**4.** $\frac{6}{4}$

C. ORDER NUMBERS LEAST TO GREATEST – Put the following in order of least to greatest.

1. 7.835, 7.358, 7.35, 7.81.

2. $-15, -51.5, -4, 0, -14, -\frac{1}{2}$

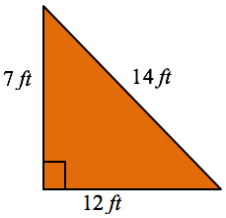
3. $2, -\frac{3}{7}, 0.75, -\frac{3}{2}$

D. PERIMETER AND AREA – Find the perimeter and area of each figure. Include labels.

1.

Perimeter: _____

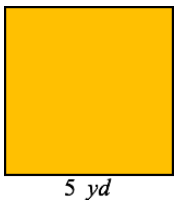
Area: _____



2.

Perimeter: _____

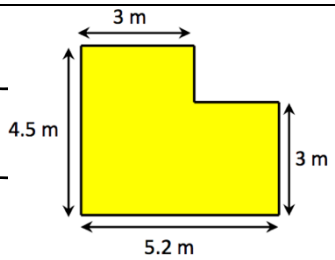
Area: _____



3.

Perimeter: _____

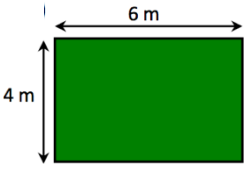
Area: _____



4.

Perimeter: _____

Area: _____



E. GRAPH POINTS ON A PLANE – Plot and label each point on the coordinate plane.

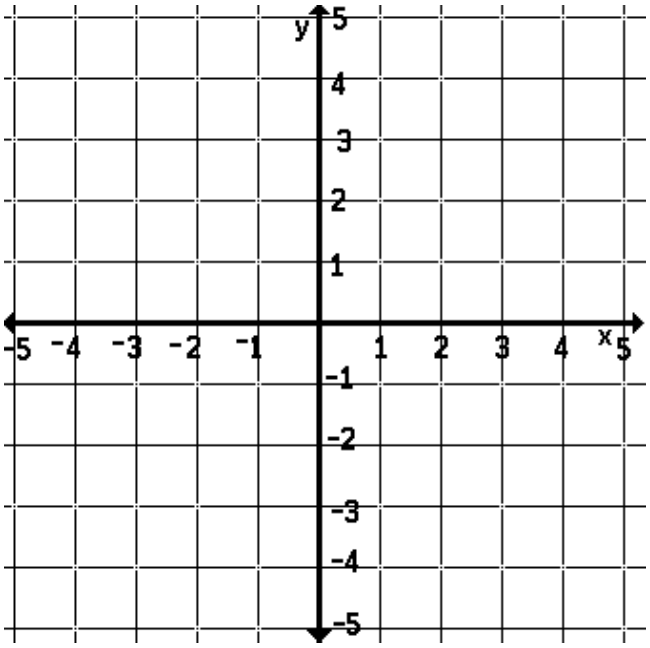
1. **A** $(2, 4)$

2. **B** $(0, -3)$

3. **C** $(5,0)$

4. **D** $(-1, -2)$

5. **E** $(-4,3)$



F. PRIME FACTORIZATION – Find the prime factorization for each number.

1. 40	**2.** 310
3. 150	**4.** 36

G. FINDING MISSING INFORMATION – Fill in the square with the correct value.

1. $\square + 4 = 10$	**2.** $12 - \square = -3$
3. $\frac{\square}{12} = 12$	**4.** $\square \cdot 4 = -12$

H. ORDER OF OPERATION – Simplify the numerical expressions below.

1. $(2 \cdot 2 + 3)^2 - (4 + 3) \cdot 5$

2. $24 \div (5 - 3)^3$

3. $2(4^2 + 5)$

4. $59 - (5 + 6^2)$

5. $(6 + 4)^2 + (11 + 10 \div 2)$

6. $2\,[32 \div (1 + 7)]$

I. EVALUATE EXPRESSIONS – Evaluate each expression.

1. $a^2 - (b^3 - 4c)$, if $a = 8,\ b = 5,$ and $c = 3.$

2. $2r + st^2 - y$, if $r = 4, s = 6, t = 3$ and $u = 12.$

3. $\frac{x^2-1}{4y^2}$, if $x = 9$ and $y = 2.$

4. $bc + 12.3$, if $a = 10,\ b = 9,$ and $c = 4.$

5. $\frac{-b-\sqrt{b^2-4ac}}{2a}$, if $a = 1,\ b = -4,$ and $c = 3.$

6. $\frac{2u+s^2}{r+2t}$, if $r = 4, s = 6, t = 3$ and $u = 12.$