Name _____

Summer Packet - Students Entering Algebra 1

When you go into Algebra 1, we assume you have certain mathematical skills that were taught to you in previous years. If you do not have these skills, you will find that you will consistently get problems incorrect in your upcoming year. These problems are meant to address these skills in a review fashion.

You are expected to have this packet completed on the first day of school. You will have a quiz on the first Friday of school on this packet. Some class time may be spent answering questions from the packet. Lunch and Learn should be utilized for additional questions.

Directions: Each of the following problems comes from Pre-Algebra and should help prepare you for Algebra 1. Please show ALL work for each problem (no calculator).

Order of Operations – Evaluate each expression.

1. $4 \times 16 + 8 - 0 \div 5$	2. $8(3 + 4) - 2 \times 8 \div (5 - 3)$	3. $\left(8^2 + (13 - 4)^2 \div 5\right)$

4. Insert parentheses to make the following equation true:
   $8 + 12 \div 4 \times 5 = 1$

Fraction Operations: write in simplest form:

5. $5\frac{2}{5} + 4\frac{1}{5}$	6. $\frac{2}{3}(3x + 9)$	7. $9 - 2\frac{1}{3}$	8. $10\frac{1}{4} - 3\frac{2}{3}$
9. $-\frac{16}{9} + 8$	10. $\frac{55}{80}$	11. $\frac{39}{6}$	12. $\frac{56}{7}$

One-Step Equations – Solve each equation and check your answers:

13. $x + 22 = 104.8$	14. $184 - x = 51$	15. $x - 6 = 30 + 12$
16. $30x = 480$	17. $4y - 8 = 20$	18. $17 = \frac{x}{3}$
19. $\frac{x}{8} = -4$	20. $\frac{x}{24} = \frac{5}{12}$	21. $\frac{7}{x} = \frac{3}{9}$

Please list the factor pairs of the following numbers.

22. 72	23. 48	24. 37

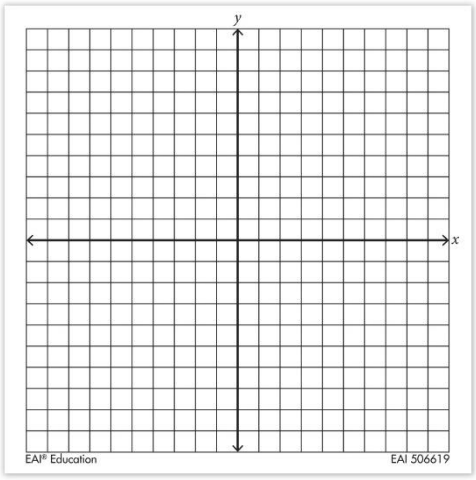
Please write a prime factorization for the following numbers using factor trees.

25.	26.	27.
210	185	204

28. Plot the following points on the grid below. Label with the appropriate letter.

A. (5,3) B. (-1,4) C. (3,0)

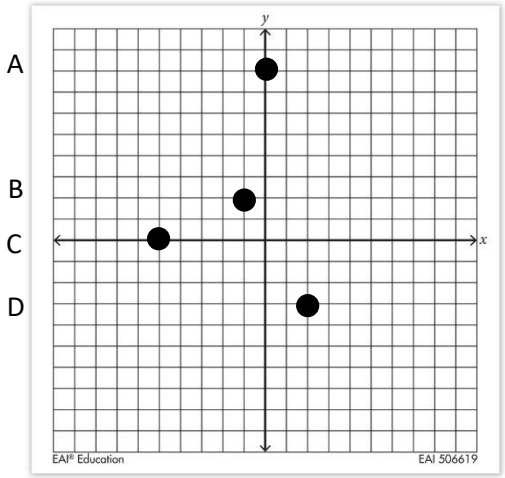
D. (-4,-6) E. (3,-5) F. (0,-2)



29. Label the coordinates of the points shown below.

A _____ B_____

C_____ D_____



Please solve for the variable in the following proportions using cross-multiplication. Show your work. Do not use a calculator. Express your answers as fraction when necessary.

30.	31.	32.
$\frac{x}{4}=\frac{70}{40}$	$\frac{5}{23}=\frac{3}{b}$	$\frac{5}{g}=\frac{25}{15}$

Please complete the following table as needed. Express your fraction answers in simplified form.

	Decimal	Fraction	Percent
33.			100%
34.	.6		
35.		$\frac{1}{3}$	
36.	4.23		
37.			64%
38.			34.2%
39.		$\frac{5}{2}$	
40.			.08%

Please convert the following to mixed fractions. Do not use a calculator.

41.	42.	43.
$\frac{12}{7} =$	$\frac{38}{3} =$	$-\frac{17}{12} =$

Please convert the following to improper fractions. Do not use a calculator.

44.	45.	46.
$5\frac{1}{7} =$	$9\frac{2}{3} =$	$-3\frac{5}{12} =$

47. Please round the following number to the indicated place.

Round to	Tenth	Hundredth	Thousandth	Thousand	Whole Number
1458.35892					