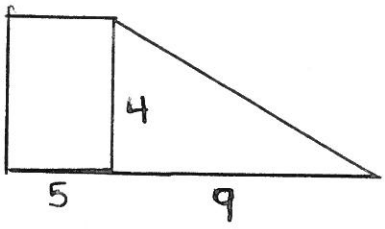
College Algebra Summer Worksheet Name _____

***These problems will be used as a pre-assessment. They will not be graded for accuracy, but will be graded on completion. This will give your teacher a baseline for where YOU are at before the class begins. There is no need to copy answers from someone else. Your teacher wants to see what you know, not what someone else knows.*

This needs to be completed by your first day of class next August!

1. Find the area.



2. Find the place value of 2 in the following number. 793,821,145

3. Identify the quadrant that the point (-3,4) lies.

4. Use a < or > to make the following a true statement. $\frac{3}{7}[\ ]\frac{5}{11}$

5. Simplify. $(-30)\div(5)+3(4)-8(-2)$

6. Simplify the radical expression. $2\sqrt[3]{27x^4y^6}$

7. List all of the elements of the set $\{-100, 0, -10.5, \pi, \frac{75}{25}, 4, 6.\overline{45}\}$ that belong to the set:

A. Rational Numbers
B. Integers
C. Whole Numbers

8. Multiply. $\frac{5}{8}\cdot\frac{5}{12}\cdot\frac{4}{25}$

9. A recipe calls for $\frac{2}{3}$ cup of milk. How much milk should be used to make $\frac{1}{4}$ of the recipe?

10. Simplify. $\dfrac{3^2+(7\cdot 2)-3}{2^2-(6)(-2)-12}$

11. Simplify. $|3-15|\cdot(-4)\div(-16)$

12. Complete the ordered pairs for the equation. $3y-2x=5$
(, 3) (5,) (1,)

13. Solve for x. $4(x - 3)= -2(2x + 1)$

14. Solve for x. $1-\frac{2}{3}x=5$

15. Evaluate $2(x^2 - 3y) + 2y$ for x = -2 and y = 1

16. What number is 130% of 65?

17. Determine the slope between the points (-2,3) and (4,-5).

18. Determine the slope and y-intercept of the line $3x + 5y = 20$

19. Solve the inequality. $4(x+2) - 3x \leq 4 - 3(1-3x)$

20. Simplify. $(5x + 2y)(3x - y)$

21. Simplify. $(x^2 - x + 2)(x^2 + x - 1)$

22. Factor completely. $4x^2 - 9$

23. Factor completely. $10x^2 - 7x - 12$

24. Factor completely. $8x^3 - 27$

25. Simplify. $(3-5+12)^2 \div 5^2 + (-3)^2$

26. Simplify. $\left(\frac{a^8 b^{-5}}{5b^{10}a^{-4}}\right)^3$

27. Rationalize the denominator. $\frac{3}{\sqrt{12}}$

28. Set up an equation. Solve showing all work!
A 15 foot ladder is leaning against a building. If the bottom of the ladder is 9 feet from the base of the building, how high does the ladder reach?

29. Solve for x. $\frac{5x}{9} - 6 = x$

30. Find the equation of the line with slope $\frac{1}{2}$ that passes through (4,3).