

## Geometry Summer Assignment - All Levels

**Directions: Print out the worksheet that follows. Complete all problems showing well organized and detailed work. The worksheet is due on the first full day of classes.**

Here are some links to assist you:

Rounding decimals:

[https://www.khanacademy.org/math/arithmetic/arith-decimals/arith-review-rounding-decimals/e/rounding\\_numbers](https://www.khanacademy.org/math/arithmetic/arith-decimals/arith-review-rounding-decimals/e/rounding_numbers)

[https://www.varsitytutors.com/hotmath/hotmath\\_help/topics/rounding-decimals](https://www.varsitytutors.com/hotmath/hotmath_help/topics/rounding-decimals)

Order of Operations:

<http://mathforum.org/dr.math/faq/faq.order.operations.html>

<http://www.purplemath.com/modules/orderops.htm>

Combining Like Terms/Distributive Property:

[http://www.softschools.com/math/topics/combining\\_like\\_terms/](http://www.softschools.com/math/topics/combining_like_terms/)

<http://www.mathwarehouse.com/dictionary/D-words/distributive-property-definition-and-examples.php>

Evaluating Expressions:

<https://www.mathplanet.com/education/pre-algebra/introducing-algebra/evaluate-expressions>

<https://www.khanacademy.org/math/algebra/introduction-to-algebra/alg1-substitution/v/evaluating-expressions-in-two-variables>

Solving Equations:

[http://mathforum.org/library/drmath/sets/select/dm\\_solve\\_equation.html](http://mathforum.org/library/drmath/sets/select/dm_solve_equation.html)

<https://www.shmoop.com/basic-algebra/equations-variables-both-sides.html>

Solving Equations(Special cases):

[http://www.montereyinstitute.org/courses/DevelopmentalMath/COURSE\\_TEXT2\\_RESOURCE/U10\\_L1\\_T3\\_text\\_final.html](http://www.montereyinstitute.org/courses/DevelopmentalMath/COURSE_TEXT2_RESOURCE/U10_L1_T3_text_final.html)

I. Rounding Numbers. Round each of the following to the parameter indicated.

1) 12.456 to the nearest tenth \_\_\_\_\_

2) 572.972 to the nearest tenth \_\_\_\_\_

3) 4.049 to the nearest tenth \_\_\_\_\_

4) 37.823 to the nearest hundredth \_\_\_\_\_

5) 97.78974 to the nearest thousandth \_\_\_\_\_

6) \$45.0967 to the nearest cent \_\_\_\_\_

7) \$678.398 to the nearest dollar \_\_\_\_\_

8) 53.621 to the nearest whole number \_\_\_\_\_

II. Simplify each expression: Show work that supports your answer to each problem.

1)  $2 + 7 \cdot 5$

2)  $27 - (4 + 2)(5) - 3^2$

3)  $8 + 4 \div 2 - 5$

4)  $(6 - 8)^2$

5)  $(-6 \times 2) \div -4$

6)  $2 \times 2(-3 - 1)$

7)  $-4 - (1 - 5) - (-4)^2$

8)  $(6 + 25 - 7) \div 6$

9)  $2 + 12 \div 2 + 1$

10)  $2 - 8 \div -2 - 3 - -12 \div -6 \times 2$

III. Simplify each expression by combining like terms and using the distributive property: Show support steps as necessary.

1)  $-6k + 7k$

2)  $n + 4 - 9 - 5n$

3)  $-5x + 3(6 + 7x)$

4)  $-2n - (9 - 10n)$

5)  $-9(6m - 3) + 6(1 + 4m)$

6)  $-y - 10y$

IV. Evaluate each expression with the values given. Show work to support your answer to each problem.

1)  $a - 5 - b$ ; when  $a = 10$  and  $b = 4$

2)  $y^2 - x$ ; when  $x = 4$  and  $y = 7$

3)  $x + y^2$ ; when  $x = 3$  and  $y = -5$

4)  $y - (z + z^2)$ ; when  $y = 6$  and  $z = 2$

5) when  $x = -2$ ,  $y = -6$ , and  $z = 8$

6)  $y - (4 - x - y \div 2)$ ; when  $x = 2$  and  $y = 4$

V. Solve each equation for the value(s) of the variable: Show work to support your answer to each problem.

1)  $15 + b = 23$

2)  $-8 = \frac{x}{2}$

3)  $-24 = -3x$

4)  $144 = -12(x + 5)$

$$5) \quad 8 + 5x = 8$$

$$6) \quad 5n + 34 = -2(1 - 7n)$$

$$7) \quad 3(2x + 4) = 6(x + 2)$$

$$8) \quad x^2 = 16$$