

Summer 2016

Dear Students,

The class you are scheduled for next year is Algebra 1. To help prepare you for a great beginning to the school year, some preparation work is being recommended. Please watch the suggested videos and complete the provided problems. You'll notice that there are not too many problems—we don't want to overwhelm you but we want you to come ready for Algebra 1! The more you practice, the more prepared you will be. Expect **a minimum of about 1 hour** to complete everything (*this does not include reviewing material, watching videos, etc.*).

You can do all of your work directly on the paper provided. If you use separate notebook paper, please just make sure it is labeled with the proper headings so that it is easy to track your work. **This Algebra 1 Summer Preparation assignment will be due on the second day of school in August.** You will also be given a MathXL assignment during the first week of the year. That assignment will be combined with this review packet for a graded assignment. We look forward to working with you in the fall!

If you have any questions, you may e-mail:

Mrs. Tusing if you plan on attending Southview in the fall at mtusing@sylvaniaschools.org

Mr. Christy if you plan on attending Northview in the fall at gchristy@sylvaniaschools.org

Thank you,

The Northview and Southview Algebra Teachers

SUMMER ASSIGNMENTS FOUND UNDER THE "FOR STUDENTS" TAB AT:

www.sylvanianorthview.org

Name _____

Algebra 1 Summer

Preparation

Translating words to expressions & combining like terms

Use the following link to watch several videos regarding algebraic expressions and combining like terms. There are four problem sets for you to practice with as well. *If you have trouble with the link, Google Khan Academy and do a search on the site for "combining like terms."*

<https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/manipulating-expressions/v/combining-like-terms>

PRACTICE PROBLEMS

1. Write an algebraic expression that is equivalent to the statement.

a) the sum of 9 and k minus 17

b) 9 less than the product of 37 and m

2. Simplify each expression by combining like terms.

a) $9x + 2x$

b) $7m - m$

c) $3x + 10y + 5x - 8y$

3. Suppose you are traveling in France. You see a T-shirt for 40 euros. If one U.S. dollar is worth 1.07 European euros, is this a reasonable price? Justify your answer.

Order of operations

Use the following link to watch several videos regarding order of operations. There are also example problems within the link for you to practice. *If you have trouble with the link, Google Khan Academy and do a search on the site for "order of operations."*

https://www.khanacademy.org/math/arithmetic/multiplication-division/order_of_operations/v/introduction-to-order-of-operations

PRACTICE PROBLEMS

1. Simplify each expression using proper order of operations.

a) $(2 + 3)^2 - 10$

b) $8 + 12 \div 6 - 3$

c) $6[(13 - 2(4 + 1))]$

2. Find the error in each of the following. Explain specifically what error was made and then simplify correctly.

a) $5 + 3(2 + 7)$

$8(2 + 7)$

$8(9)$

72

b) $2 + 4 \cdot 5$

$6 \cdot 5$

30

Working with positive and negative integers

Use the following link to watch several videos regarding integers. There are also two problem sets within the link for you to practice. *If you have trouble with the link, Google Khan Academy and do a search on the site for “adding integers.”*

https://www.khanacademy.org/math/arithmetic/absolute-value/adding_subtracting_negatives/v/negative-numbers-introduction

PRACTICE PROBLEMS

1. Simplify.

a) $(-7) + (-4)$

b) $5 - (-9)$

c) $-3(-5)$

2. While watching the news, you hear Blizzard Bill say “It is currently 10 degrees and it will drop 7 degrees before morning.” According to Blizzard Bill’s prediction, what will the temperature be when you wake up?

3. You start with \$74 in your savings account and then deposit \$18 more into the account. A week later, you make two different withdrawals—one for \$47 and another for \$29. Your aunt then gives you a check that you deposit for \$120. What is your current balance after all of these transactions?

The distributive property

Use the following link to watch several videos regarding the distributive property. There are example problem within the link for you to practice. *If you have trouble with the link, Google Khan Academy and do a search on the site for "distributive property."*

https://www.khanacademy.org/math/arithmetic/multiplication-division/distributive_property/v/the-distributive-property

PRACTICE PROBLEMS

- Using order of operations and the distributive property, show two ways to simplify the following expression: $2(3 + 5)$

Order of operations:

Distributive property:

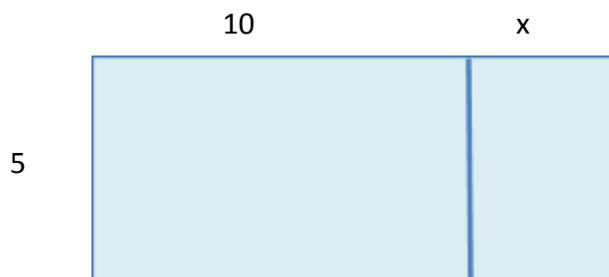
- Simplify the following expressions by using the distributive property.

a) $9(m + 2)$

b) $-4(x + 3)$

c) $5(5b - 2)$

- Find the area of the pool by using the distributive property.



- If the pool shown above has an area of 60, what is the value of x ?

Solving basic equations

Use the following link to watch several videos regarding equations. There are several problem sets for you to practice with as well. *If you have trouble with the link, Google Khan Academy and do a search on the site for "one step equations."*

https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/solving-one-step-equations

PRACTICE PROBLEMS

1. Solve the following equations:

a) $15n = 45$

b) $2x - 7 = 5$

c) $\frac{y}{4} + 3 = 5$

2. Define a variable and write an equation for the situation. Then solve. The school library receives a large cash donation and uses the funds to double the number of books it owns. Then a book collector gives the library 200 books. After this, the library has 500 books. How many books did the library have before the cash donation and the gift of books?

3. What is the error in the work? Solve the equation correctly. $\frac{m}{3} - 9 = -21$

$$\frac{m}{3} - 9 + 9 = -21 + 9$$

$$\frac{m}{3} = -12$$

$$m = -4$$