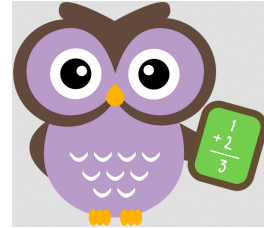


WELCOME BACK TO SCHOOL

Ms. Engbrecht Algebra Concepts



Sep 6-8:19 PM

About Me



Oldest of 4

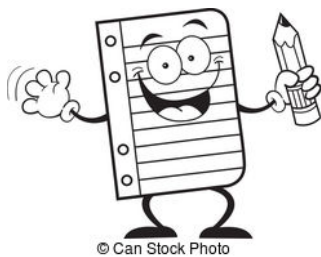
Aug 28-1:55 PM

BE HERE
WORK HARD
BE NICE



Sep 6-8:20 PM

Syllabus
&
Hall Passes



Sep 6-7:42 PM

Class Rules

- No food or beverage (except water)
- No electronics except your calculator
(No Phone, iPod, iPad, etc.)
- Be on time (In your seat when bell rings)
- **Have a good attitude**
- Follow the rules set forth by the school

Sep 6-8:30 PM

GRADES

50% tests

30% quizzes

20% assignments



Sep 6-8:42 PM

Homework

- Expect it daily
- Typically due at the Beginning of next class

Sep 6-8:50 PM

Testing Procedure

- Review Day
- Test Day
- Outside of class Retake if you have all assignments done



Sep 6-9:03 PM

Rules Continued...

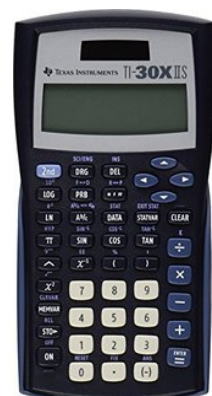
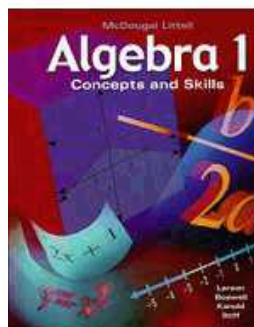
- passes (only during work time)
- end of the hour (stay in your seat)
- sharpening pencils
(do it before class or during work time)
- be prepared
(notes in binder, book, pencils, paper)
- NO PHONE



Sep 6-9:12 PM

Every Day You Will NEED...

- Pencils
- Paper
- Binder (your notes)
- Textbook
- Calculator
- Planner



Sep 6-8:45 PM

Any Questions?



Sep 6-10:03 PM

Student Survey

Eng-break +



Sep 6-9:51 PM

Textbooks



*Will be dismissed by rows

*Make sure you sign out the book on the survey (top corner)

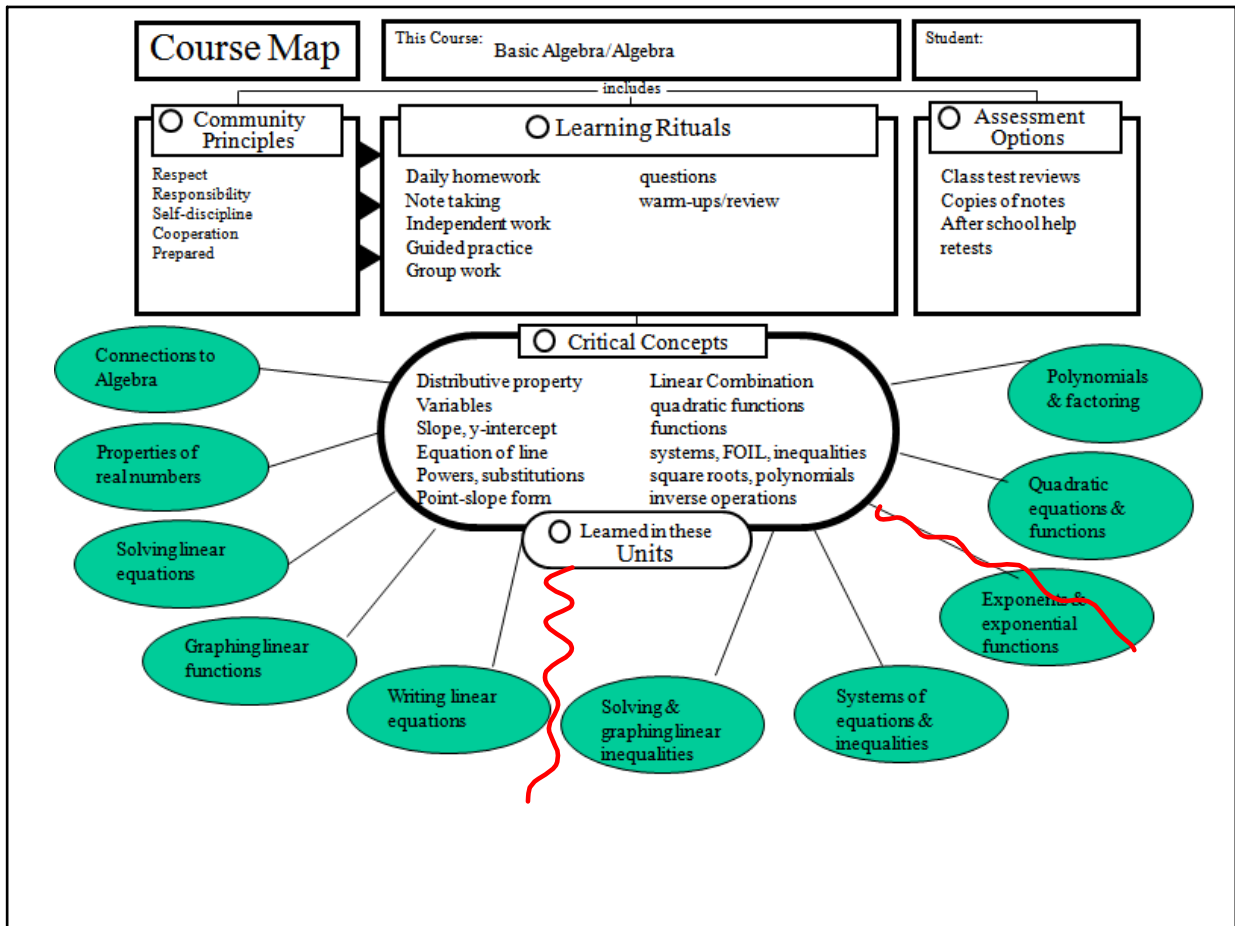
***COVER YOUR BOOK**

- Bring In PAPER BAG if you need help

Sep 6-9:17 PM

Teacher(s): Engbrecht Time: 2015-2016	<h2 style="margin: 0;">The Course Organizer</h2>	Student: _____ Course Dates: _____														
<input type="radio"/> This Course: Algebra 1.5 & Algebra 1.5 Concepts <div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;"> is about Using algebraic tools to solve problems. </div>	<input type="radio"/> Course Standards <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">What ?</th> <th style="text-align: left;">How?</th> <th style="text-align: left;">Value?</th> </tr> </thead> <tbody> <tr> <td>Daily homework</td> <td></td> <td>20%</td> </tr> <tr> <td>Weekly quizzes</td> <td></td> <td>30%</td> </tr> <tr> <td>Chapter tests</td> <td></td> <td>50%</td> </tr> <tr> <td>Final test</td> <td></td> <td>Part of tests</td> </tr> </tbody> </table>	What ?	How?	Value?	Daily homework		20%	Weekly quizzes		30%	Chapter tests		50%	Final test		Part of tests
What ?	How?	Value?														
Daily homework		20%														
Weekly quizzes		30%														
Chapter tests		50%														
Final test		Part of tests														
<input type="radio"/> Course Questions: <ol style="list-style-type: none"> 1. How do you use expressions, equations, and inequalities to model and solve real-life situations? 2. How can you solve linear equations? 3. How do you graph lines and evaluate functions? 4. How do you write linear equations and apply them to real-life situations? 5. How do you solve linear inequalities? 6. How do you solve systems of two linear equations? 7. How do you simplify expressions involving exponents, graph exponential functions, and model real-life situations? 8. How can various techniques be used to solve and graph quadratic equations and functions? 9. How can different techniques and operations be used with polynomials? 																

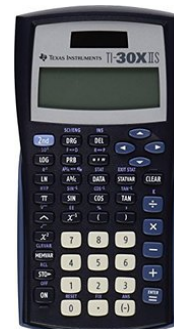
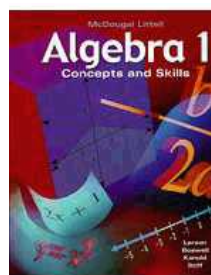
Sep 6-10:18 PM



Sep 6-10:35 PM

Do You Have Your...

- Pencil
- Paper
- Textbook
- *Binder
- *Calculator



If your syllabus is signed, turn the last page in to the 3rd hour basket as you come in.

Sep 8-9:41 AM

The Unit Organizer		NAME _____ DATE _____
Algebra 1.5 Concepts		
② LAST UNIT Experience None	① CURRENT UNIT Connections to Real Numbers	③ NEXT UNIT Experience Properties of Real Numbers
⑧ Student Activities or Assignments 1.1 1.2 1.3 1.4 1.8	⑤ UNIT MAP 	
⑦ UNIT SELF-TEST QUESTIONS 1. How do you use order of operations to evaluate both numerical and variable expressions? 2. How do you know if a number is a solution to an equation or inequality? 3. How do you evaluate functions?	Evaluate Simplify Check Determine	⑥ UNIT RELATIONSHIPS

Sep 6-10:38 PM

1.1 Variables in Algebra

Goals: • Evaluate variable expressions

EQ: How do you evaluate an expression that has variables?

Aug 11-10:40 PM

Vocabulary

Variable: a letter used to represent a number

Values: numbers

Variable expression: letters, numbers, operations
Multiply $2x$ $2 \cdot x$ $2(x)$ $\div \frac{3}{6}$
 $+, -, \cdot, \div$

Numerical expression:
 Represents numbers

Evaluate: plug in number for variable and solve
 10
 $9+1$ $5 \cdot 2$

Aug 11-10:46 PM

Example 1: Describe the Variable Expression

<u>Variable Expression</u>	<u>Meaning</u>	<u>Operation</u>
a. $3x, 3 \cdot x, (3)(x)$	<u>3</u> times <u>x</u>	<u>x</u>
b. $\frac{14}{y}, 14 \div y$	<u>14</u> divided by <u>y</u>	<u>÷</u>
c. $9 + a$	<u>9</u> plus <u>a</u>	<u>+</u>
d. $12 - b$	<u>12</u> minus <u>b</u>	<u>-</u>

****Note:** The multiplication symbol \times is usually not used in algebra because of its possible confusion with the variable x .

Aug 11-10:51 PM

Example 2: Evaluate the Variable ExpressionEvaluate the variable expression when $x = 5$.ExpressionSubstituteSimplify

a. $5x$

$5(5) =$

25

b. $\frac{40}{x}$

$\frac{40}{5} =$

8

Aug 11-11:05 PM

Try ItEvaluate the variable expression when $x = 4$.

1. $10x$

$10(4)$

40

2. $\frac{20}{x}$

$\frac{20}{4}$

5

3. $10 - x$

$10 - 4$

6

4. $x + 8$

$4 + 8$

12

Aug 11-11:09 PM

Example 3: Evaluate rt to Find Distance

Find the distance d traveled in 30 minutes by a remote control car going an average speed of 10 miles per hour. Use the formula: distance equals rate r multiplied by time t .

Formula: $d = rt$

$D = 10 \cdot \frac{1}{2} = \frac{10}{2}$

5 miles

Answer: The distance traveled by the remote control car was 5 miles.

Note: To evaluate a variable expression, you write the expression, substitute a number for each variable, and simplify.

***Make sure Units match, otherwise convert**

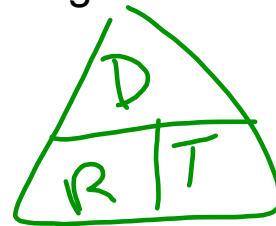
Aug 11-11:12 PM

Try It

5. Using a variable expression, find the distance traveled in 20 minutes by a remote control car moving at an average speed of 9 miles per hour.

12

$$\frac{20 \div 20}{60 \div 20} = \frac{1}{3} \text{ hr } t$$



$$D = 9 \cdot \frac{1}{3}$$

$$= \frac{9}{3} = 3 \text{ miles}$$

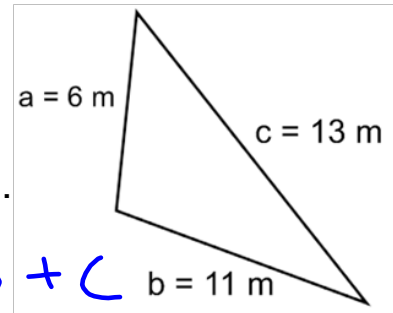
Aug 11-11:18 PM

Example 4: Find the Perimeter

The perimeter P of a triangle is equal to the sum of the lengths of its sides:

$$P = a + b + c$$

Find the perimeter of the triangle in meters.



1. Write the formula $P = a + b + c$
2. Substitute $P = 6 + 11 + 13$
3. Simplify

$$P = 30\text{ m}$$

Aug 11-11:21 PM

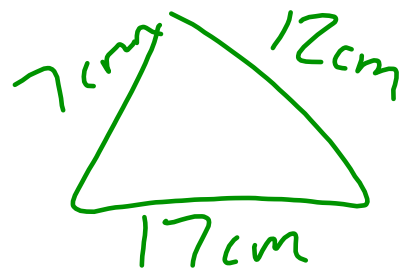
Try It

6. Find the perimeter of a triangle with sides 7 centimeters, 12 centimeters, and 17 centimeters long.

$$P = a + b + c$$

$$P = 7 + 12 + 17$$

$$P = 36\text{ cm}$$



Aug 11-11:25 PM

Summary

EQ: How do you evaluate an expression that has variables?

$3+x$ when $x=2$ substitute then solve

Homework:

p.6 #18-32, 34-42even

Sep 8-9:46 AM