Learning Works Charter School

Algebra 1A
Module 1

Student Name: _____ Teacher Name: _____

As you work through the chapters in your Algebra 1 course, you will be encouraged to think and to make conjectures while you persevere through challenging problems and exercises. You will make errors – and that's okay! Learning and understanding occur when you make errors and push through mental roadblocks to comprehend and solve new and challenging problems.

Text: *Algebra 1 Common Core,* Big Ideas, 2015

To ensure you are learning, you must show your work for all exercises.
YOU WILL <u>NOT EARN CREDIT</u> FOR ANSWERS <u>WITHOUT WORK</u>.

Chapter 1: Solving Linear Equations (1.1-1.5)

_____ Maintaining Mathematical Proficiency (page 1): Complete exercises #1-19 **all**

_____ 1.1 Solving Simple Equations: Read the lesson and complete exercises #1, 5, 6, 7-10 **all**, 14, 17, 21, 22, 23, 25, 27, 42, 50, 58, 60, 61

_____ 1.2 Solving Multi-Step Equations: Read the lesson and complete exercises #1, 3-9 **all**, 11, 12, 13, 14, 17, 18, 25, 29, 33, 42, 57, 58

_____ 1.3 Solving Equations with Variables on Both Sides: Read the lesson and complete exercises #3-8 **all**, 10, 11, 16, 25, 41, 42, 43, 44

_____ 1.4 Solving Absolute Value Equations: Read the lesson and complete exercises #2-19 **all**, 49, 64, 66, 67

_____ 1.5 Rewriting Equations and Formulas: Read the lesson and complete exercises #3, 4, 6, 7, 8, 13, 15, 35, 47, 48, 49, 50

Students must complete the Chapter Review and Project with a teacher or tutor at school.

_____ Chapter Review (pages 44-46): Complete exercises #1-23 **all**

_____ Complete the attached Project **(No project = No credit)**

A teacher or tutor reviewed the Chapter Review and Project with the student.

Date: _____ Signature: _____

Grade

High School Completion

<u>**Be sure to answer questions in complete sentences and show all of your work.**</u>

Part A: Fernando Wants to Graduate
Fernando is a student at Walt Disney High School and needs 220 credits to earn his high school diploma. He currently has 124 credits completed. There are 10 learning periods in one school year.

1. How many learning periods would it take Fernando to graduate if he completes 3 modules per learning period? (Remember that each module is worth one credit.)

2. How many school years would it take Fernando to finish at this rate? (Remember: There are 10 learning periods per school year)

3. How many learning periods would it take Fernando to graduate if he completes 5 modules per learning period?

4. How many school years would it take Fernando to finish at this rate?

In order to solve these problems for any student, we could use the equation T = mp + c, where:

- T represents the TOTAL number of credits needed to graduate,
- m represents the number of MODULES the student completes in each learning period,
- p represents the total number of LEARNING PERIODS, and
- c represent the number of CREDITS already completed.

5. What is "T" in Fernando's situation? _____

6. What is "c" in Fernando's situation? _____

7. Let's try using this equation to find p, the total number of learning periods it would take Fernando to graduate if he completes 8 modules per learning period.

$$T = mp + c$$

Equation: _____

Solve for p:

8. How many school years would it take Fernando to finish at this rate?

Part B: How long will it take YOU to graduate?

Learning Works requires 180 credits to earn a high school diploma. Ask your teacher how many credits you have completed. How many learning periods will it take **YOU** to graduate if **YOU** complete 3 modules per learning period? 5 modules? 8 modules?

How many credits have you completed? _____
When are you planning to graduate? _____

Let's see if you are on track!

3 modules:
       Equation: _____
       Solve for p:

       Number of learning periods:
       Number of school years:

5 modules:
       Equation: _____
       Solve for p:

       Number of learning periods:
       Number of school years:

8 modules:
       Equation: _____
       Solve for p:

       Number of learning periods:
       Number of school years:

1. How many modules do you typically complete per learning period?

2. Would you consider this adequate progress toward graduation? Why or why not?

3. Based upon your findings, can you meet your graduation goal? Explain.

4. What changes need to be made in order to make your graduation goal?

5. If you get a decimal for the number of years, what does that mean in terms of graduation?