

Upper School Algebra 1 Summer Assignment Directions

Dear Students and Parents,

The math work to be completed this summer is broken into two parts. Each part has a distinct purpose in shaping the hearts and minds of students in Algebra 1 so that they become excited and eager to take part in learning the Algebra 1 curriculum.

The first part of the work is that students will read a fictional book from the list below that tells an enjoyable story with a math element. **Please do not pick a book that you have already read, or one required for another course summer assignment.** The purpose of this reading as part of the math curriculum summer work is to engage students in learning and excited about the math concepts, they will be learning in the coming school year. As students read different sections of the book, they are to reflect on the writing and identify scenes and quotes that relate to mathematics.

Students should then answer all questions and be prepared to discuss and share a summary and math elements of the book they read the first week of school.

The second part of the summer assignment includes additional practice problems. The concepts have been previously studied and students should be familiar with all of these concepts in preparation for learning Algebra 1. Students should complete these to their best ability and be certain to show all work.

Have a wonderful, math filled summer!

Students Name: _____

The work in this assignment was completed independently by my student:

Parent Signature: _____

3. Describe the main character of the story. Include both physical traits and personality characteristics.

4. Write a description of the main conflict experienced by the characters in your book (6- 8 sentences).

5. **List** 3 themes that are developed in your book.

6. Explain how this book connects to your life, our society (past/present/future), and other types of media (ex: songs, tv shows, movies, books, etc.). You should have 1 paragraph total (6-8 sentences).

7. Explain how this book connects to math and what you learned about how math can be viewed outside of the classroom. You should have 1 paragraph total (6-8 sentences).

Upper School Algebra 1 Summer Assignment Part 2

Please complete these practice problems to prepare for the work you will complete in Algebra 1. If unsure, you are encouraged to use notes and work from previous classes, Khan Academy, or mathisfun.com. Do your best work and make sure to show all work.

Section One: Number Sense

a) Write each fraction or mixed number as a decimal.

1) $-\frac{2}{5}$	2) $\frac{5}{33}$	3) $3\frac{5}{8}$
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b) Write each decimal as a fraction or mixed number.

4) -3.9	5) 0.75	6) 0.125
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c) Round the number **375.489** to the correct digit.

7) Round to the nearest whole number	8) Round to the nearest hundredth	9) Round to the nearest tenth
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d) Add or subtract the following rational numbers.

10) $2.18 - 0.99$	11) $3.97 + 1.4$	12) $\frac{4}{7} + 2\frac{4}{7}$
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e) Add the following integers

13) $-6 + (-3)$	14) $-8 + 10$	15) $-3 + 10 + (-6)$
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f) Subtract the following integers

16) $-6 - 3$	17) $-8 - (-10)$	18) $13 - 21$
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g) Multiply the following **rational** numbers (remember a rational number is a number that *can* be written as a fraction.)

19) $(-6)(-8)$	20) $(3.28)(4.1)$	21) $\left(\frac{2}{3}\right)\left(\frac{3}{7}\right)$
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h) Evaluate each expression; make sure you follow the correct order of operations (**PEMDAS**)

22) $16 - 12 \div 4$	23) $5 - 6 \times 2 \div 3$	24) $2^3 - 32 \div 8 + 5$
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i) Evaluate the following expressions if $a = -6$, $b = 4$, and $c = -5$

25) $a - 8$	26) $b - a - c$	27) $3c + b$
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Section 2: Algebraic Expressions

a) Translate each phrase into a variable expression or equation.

28) Six more than one fourth a number	29) Two less than four times a number
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b) Simplify each of the following expression completely. Remember to distribute to both terms!

30) $9(x - 4)$	31) $5(6 + x)$	32) $-4(5y - 3)$
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c) Simplify the following expressions completely. Remember to combine like terms.

33) $-x + 6 + 5x - 3$	34) $4 - x - 7 - 5x$	35) $x + 5 - x + 2$
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Section 3: Solving Algebraic Equations

a) Solve for the indicated variable in each equation.

36) $a + 9 = 13$	37) $-54 + m = 82$	38) $w - 83 = -100$
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b) The following questions are solving two-step equations. Make sure you show your work.

39) $4x + 7 = 35$	40) $17 + 6p = -73$	41) $\frac{p}{5} - 2 = -6$
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Section 4: Word Problems

Write an equation based on the information provided in each problem, and then solve. Show ALL your work!

42) Five more than a number is fifty-seven. What is the number?
43) Jane paid \$108 for 6 tickets to a hockey game. How much did each ticket cost?