

Family Letter

Dear Parent or Guardian:

Often real-world situations can be modeled using algebraic expressions, equations, and inequalities. Knowing how to write an equation to represent a problem situation from life such as comparing varying costs of several long-distance phone companies can make the problem easier to solve.

In **Chapter 10, Algebra: More Equations and Inequalities**, your child will learn how to simplify algebraic expressions, solve and write equations and inequalities that represent real-world situations, and use the guess and check problem-solving method. In the study of this chapter, your child will complete a variety of daily classroom assignments and activities and possibly produce a chapter project.

By signing this letter and returning it with your child, you agree to encourage your child by getting involved. Enclosed is an activity you can do with your child that also relates the math we will be learning in Chapter 10 to the real world. You may also log on to the **Online Study Tools** for self-check quizzes, Parent and Student Study Guide pages, and other study help at www.msmath3.net. If you have any questions or comments, feel free to contact me at school.

Sincerely,

Signature of Parent or Guardian _____ Date _____

Family Activity

Writing Equations that Represent Real-Life Situations

Work with a family member to answer the following questions concerning the three long distance phone companies described below.

The Talk-to-Me phone company charges a monthly fee of \$4.95 and \$0.07 per minute on all long distance phone calls.

The Gab-All-You-Want phone company charges a monthly fee of \$5.95 and \$0.05 per minute on all long distance phone calls.

The Across-the-Miles phone company charges no monthly fee and \$0.10 minute on all long distance phone calls.

1. For each phone company, write an equation that represents the companies' cost plan. Let C represent the total monthly cost and m represent the number of minutes of long distance phone calls made per month.

Phone Company	Equation
Talk-to-Me	$C =$
Gab-All-You-Want	$C =$
Across-the-Miles	$C =$

2. If you made 45 minutes of long distance calls per month, which plan would be the least expensive?
3. If you made 100 minutes of long distance calls per month, which plan would be the least expensive?
4. Sarah usually makes 150 minutes of long distance calls per month. Which plan would be the least expensive for Sarah?
5. Michael usually makes 200 minutes of long distance calls per month. Which plan would you recommend to Michael?
6. Write and solve an equation to find the number of minutes of long distance calls per month for which the Talk-to-Me and Gab-All-You-Want phone companies' costs are equal.
7. What is the total monthly cost of the phone calls in Exercise 6?