

## Enatai Math Challenge 4

### February 2009

These problems are labeled in order of increasing difficulty. Choose the one that you think fits your grade and math ability and solve the problem. People at home can help you. You will need to submit your answer using the R-E-C format that is explained on the attached form. Be certain to put the letter of the problem, your name and your teacher's name on the form when you submit it. All solutions are due to Mrs. Gaylord by Friday, February 27<sup>th</sup>. Bring your completed R-E-C form to the office. Students who successfully complete the challenge with the correct answer and a logical explanation of their mathematical thinking will receive a certificate and their name listed in the Principal Update. Happy Problem Solving!!!



#### **Primary Problem A**

Three kids each own three dogs. Each of the three dogs has three different collars. How many collars are there all together?

#### **Primary Problem B**

You walk past a restaurant and notice that there are ten tables on the sidewalk so people can eat outside. Seven tables are set for four people and the rest are set for two people. How many people can be seated outside altogether?



#### **Primary Problem C**

One class of 29 students is going on a field trip with their teacher. They are bringing four chaperones with them. Another class of 24 students will join them along with their teacher and three chaperones. How many people are on the field trip altogether?

#### **Primary Problem D**

If you have six blocks, you can arrange them in the following ways so that all towers are the same heights:

- One tower of six blocks
- Two towers of three blocks each

If you have 48 blocks, what are all the different ways that you can stack them so that all the towers have the same height?



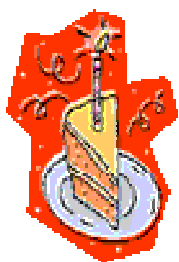


### **Intermediate Problem E**

You have four dollars, one dime, three quarters, two nickels, and seven pennies. You buy some popcorn at one store, then juice at a second store. When you arrive home, you look and see that you have one dollar, three dimes, one quarter, seven nickels and two pennies. How much money did you spend altogether?

### **Intermediate Problem F**

Mrs. Skipper has 16 basketballs, 28 tennis balls, and 12 hula hoops to use for a game with her gym class. To play the game, Mrs. Skipper must divide a class of 24 students into equal-sized groups. Each group must receive the same number of basketballs, tennis balls, and hula hoops. How many equal-sized groups are possible? How many basketballs, tennis balls, and hula hoops will each group use for the game?



### **Intermediate Problem G**

When Billy turned 14 years old, his father was 42 years old, which was three times Billy's age at the time. Today is Billy's birthday, and Billy's father is now twice as old as Billy. How old is Billy?

### **Super-Duper Challenge Problem**

A group of boys and girls took a test. Exactly  $\frac{2}{3}$  of the boys and exactly  $\frac{3}{4}$  of the girls passed the test. If an equal number of boys and girls passed the test, what fraction of the entire group passed the test?

