

Enatai Math Challenge 4

March 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, March 27th. 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



Imagine you followed an old map that led you to a magnificent treasure chest. Your map says that when you reach the chest, you will find 18 shining pieces of gold. When you find the chest and look inside, you see 6 red velvet bags. The 18 pieces of gold are equally divided among the 6 bags. Before you can take the gold, though, you must figure out how many gold pieces are in each bag.

Primary Problem B

The 24 students in a first grade classroom are planning to donate pennies to a local charity. About how many pennies will each student need to bring to school if they are to meet their goal of collecting \$30?



Primary Problem C

A group of five boxes, lettered A through E, must be arranged from heaviest to lightest. None of the boxes weights the same. Box A weights 4 kg. Box B weights 9 kg. Only box C weighs less than Box A, and only Box D weights more than Box B. Where in the arrangement does Box E belong?



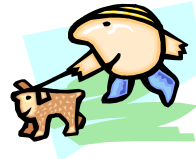
Primary Problem D

A marching band has 36 members. They are getting ready to march in a parade. When they march, they march in rows that contain the same number of members as the rest of the rows. How many ways can they arrange themselves into rows for the parade?



Intermediate Problem E

Your neighbor wants to hire you to walk her dog while she is away for fifteen days. You decide how she will pay you. You can either have \$5.00 a day for each of the fifteen days or one penny the first day, two pennies the second day, four pennies the third day, and so on, doubling the amount each day. Which way would you rather get paid? Explain.



Intermediate Problem F



The tornado that struck Greensburg, Kansas on May 4, 2007, was rated an F5 storm according to the Fujita Scale (names for Tetsuya Theodore [Ted] Fujita). The storm struck Greensburg at around 9:45 p.m. and caused major damage. At 1:05 a.m., significant damage was reported when the storm struck the town of Claflin (about 65 miles away). Determine the ground speed of the tornado (how fast it traveled).

Intermediate Problem G

Our middle school needs a new game balls for next year. Footballs cost \$80.00 each, baseballs are \$22.50 each, and soccer balls are \$68.00 each. The school needs three times as many baseballs as soccer balls, half as many soccer balls as footballs, and twelve footballs. How much will the school spend for the new game balls?



Super-Duper Challenge Problem

What three consecutive numbers have a sum that is 20% of the product of the three numbers?