HOMEWORK WEEK OF OCTOBER 27, 2014

Division E | Mathematical Olympiads for Elementary and Middle Schools | DECEMBER 12, 2000 | Contest 2

2A ***Time: 4 minutes***

An odd number between 301 and 370 has three different digits. If the sum of its digits is five times the hundreds digit, find the number.

Hint: Sum of its digits is 5 x 3

2B ***Time: 4 minutes***

In this subtraction, PR5T and 47Y6 represent 4-digit numbers. What number does PR5T represent?

Hint: Change subtraction into addition - think opposites

$$\begin{array}{r} PR5T \\ -\ 47Y6 \\ \hline 1998 \end{array}$$

2C ***Time: 7 minutes***

Ten people stand in line. The first goes to the back of the line and the next person sits down, so that the person who was third is now first in line. Now that person goes to the back of the line and the next person sits down. This process is repeated until only one person remains. What was the original position in line of the only remaining person?

Hint: Place the numbers around a circle, draw it

2D ***Time: 6 minutes***

Tape two cm wide is used to completely cover a cube 10 cm on each edge. Find the length of tape needed, in cm, if there is no overlap of the tape.

Hint; Find the total surface area of the cube

2E ***Time: 7 minutes***

The five members of the computer club decided to buy a used computer, dividing up the cost equally. Later, three new members joined the club and agreed to pay their fair share of the purchase price. This resulted in a saving of $15.00 for each of the original five members. What was the price in dollars of the used computer?

Hint: Find multiples of both 5 and 8