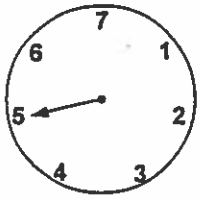
Homework Week of November 3

Division **E** | **Mathematical Olympiads** **FEBRUARY 13, 2001** *for Elementary and Middle Schools* | Contest **4**

4A ***Time: 3 minutes***

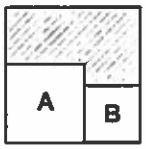
In the figure at the right, the hand now pointing to 5 moves clockwise to the next numeral every hour. To which numeral will the hand point 24 hours from now?



Hint: Every 7 hours the hand returns to its starting point

4B ***Time: 6 minutes***

A square contains two squares, A and B, with areas of 16 square meters and 9 square meters, as shown. Find the number of meters in the perimeter of the shaded region.



Hint: Add or subtract lengths of sides of squares to find the lengths of the segments

4C ***Time: 5 minutes***

The average of six numbers is 4.
A seventh number is added and the new average is 5.
Find the seventh number.

SKIP (unless you know about averages)

4D ***Time: 6 minutes***

The numbers 1, 2, 3, and 4 are placed in the empty squares so that each row, each column, and each diagonal contains each of the four numbers. Find the value of **A** and the value of **B**.

1	2	3	4
4			1
A	B		

Hint: fill in the squares one at a time

4E ***Time: 7 minutes***

One morning Sandy took out half of the coins from her coin bank, and in the evening she put in 20 coins. The next morning she took out one third of the coins in the bank, and that evening she put in 4 coins. The next morning, she took out half the coins in the bank, leaving 15 coins. How many coins were in the bank to begin with?

Hint: Work backwards