



2009-2010 Puzzle Contest #5 Solutions



Grades K-5 Puzzle Solutions:

1. DOESN'T NATURE HAVE FINE WEATHER?

FOR SOME PERIOD OF TIME it was observed that if it was raining at the morning then the weather was fine at the night, but if it was raining at night then the weather was fine in the morning. There were 9 days when it rained, 6 days when the weather was fine at night and 7 days with fine mornings. How long was that period of observation? **50 points**

Answer: That period of observation was 11 days.

Solution: There were totally $\frac{1}{2}(6 + 7 - 9) = 2$ days with fine round day weather.

It means the total time of that observation was $9 + 2 = 11$ days

2. MATHEMATICS OF BADMINTON THE SPORT

27 PLAYERS TAKE PART in a "Play Off" badminton tournament. It means that each player leaves the tournament after the first defeat. How many matches does tournament require for getting the winner?

(There are no draws in the game of badminton). **30 points**

Answer: 26 matches

Solution:

way #1 : 26 matches = $13 + 7 + 3 + 2 + 1$.

way #2 : 26 out of 27 matches have to take place to get one winner.

3. THE CALCULATED CUTS

IS IT POSSIBLE to cut the clock-face with two lines into three parts so that sums of numbers in each part is equal? Show your solution.

Answer: Yes, it is possible. The sum of numbers in each part is 26(See picture) **20 points**

