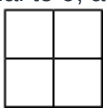
Math Kangaroo 2008 Sample Questions - Levels 7 & 8

4. The blades on the front of a windmill rotate at a constant speed. The whole set makes a full rotation in 50 seconds. How many blades are there, if a sensor mounted on the top of the windmill notes that a blade passes every 10 seconds?

A) 2 B) 3 C) 5 D) 10 E) 50

5. The numbers 2, 3, 4, and one more number are written in the cells of a 2 x 2 table. It is known that the sum of the numbers in the first row is equal to 9, and the sum of the numbers in the second row is equal to 6. The unknown number is:



A) 4 B) 5 C) 6 D E) 8

11. How many squares can be drawn by joining the dots with line segments?

A) 2 B) 3 C) 4 D) 5 E) 6

12. Dan has 9 coins, each worth 2 cents. His sister Ann has 8 coins, each worth 5 cents. What is the least number of coins they should exchange with each other in order for each of them to have the same amount of money?

A) 4 B) 5 C) 8 D) 12 E) It is impossible to do

24. In the equation KAN – GAR = OO each letter represents a certain digit (different letters represent different digits, the same letters represents the digits). Find the largest possible value of the number KAN.

A) 987 B) 876 C) 865 D) 864 E) 785

25. In a certain class, the girls make up more than 45% but less than 50% of the whole class. What is the smallest possible number of girls in that class?

A) 3 B) 4 C) 5 D) 6 E) 7