

## TMC – 2006 – MATH BOWL

Round 2	Questions	Answers
1.	The sum of three consecutive prime numbers is 31? What are the numbers?	7, 11, 13
2.	What is the area of a rectangle with side of length 4 and diagonal of length 5?	12
3.	If a fair six-sided die is rolled three times, what is the probability that the same number will appear exactly twice?	$\frac{5}{12}$ or 5:12
4.	What is the least common divisor of 12, 45, and 75?	3
5.	How many integers have absolute value less than 9?	17
6.	An item cost \$18 last summer. What is the cost if it is on sale at 15% off?	\$15.30
7.	What are the coordinates of the point of intersection of the lines $2x - 5y = 12$ and $y = x$ ?	(-4, -4)
8.	Two books weigh a total of 6 pounds. One book's weight is one-half that of the other. What is the weight in pounds of the heavier book?	4
9.	In how many ways can a set of 7 students be chosen from a class of 11 for a task?	330
10.	What is the sum of the roots of the equation $x^2 + 6x + 2 = 0$ ?	-6

### Tie Breakers

1.	What is the largest number of regions that can be formed by three lines in a plane?	7
2.	Without breaking any cubes into pieces, what is the maximum whole number of cubes of side length 2 that can fit inside a cube of side length 5?	8