

## TMC – 2006 – MATH BOWL

Round 8	Questions	Answers
1.	If it takes 30 minutes to paint each room in a 96-room hotel, how many 8-hour workdays does it take to paint half of the rooms?	3
2.	Answer True or False. In the equation $x^2 + 3y^2 = 5$ , $y$ is a function of $x$ .	False
3.	The area of a trapezoid is 48 and its bases are 7 and 9. What is the altitude of the trapezoid?	6
4.	Which fraction is larger, $\frac{4}{7}$ or $\frac{2}{3}$ ?	$\frac{2}{3}$
5.	What is the difference between 31 and the sum of the integers from 1 to 6?	10
6.	A quadratic that has two imaginary roots has _____ discriminant.	negative
7.	What is the smallest positive integer $n$ for which $3^n > 500$ ?	6
8.	What is the median of the first 15 even natural numbers?	16
9.	If we reject the null hypothesis when, in fact, it is true, we have committed a _____ error when hypothesis testing.	Type I
10.	What is the rational number equal to 0.375?	$\frac{3}{8}$

### Tie Breakers

- What is the slope of a line that passes through the origin and the point  $(\sqrt{2}, -\sqrt{2})$ ? -1
- The sum of three consecutive even integers is 84. What are the numbers?  
26, 28, 30 (in any order)