

TMC – 2006 – MATH BOWL

Round 4	Questions	Answers
1.	What is the midpoint of the line segment from $(2, -1)$ to $(2, 7)$?	$(2, 3)$
2.	What is the radius of a circle of area 49?	$\frac{7}{\sqrt{\pi}}$
3.	What is the two-digit number x which is divisible by 7 such that the sum of digits of x is 11?	56
4.	What are the prime factors of 345?	3,5,23 (any order)
5.	What is the slope of a line perpendicular to $5y - 3x = 7$?	$-\frac{5}{3}$
6.	Does the line $6y = 8x + 4$ pass through the point $(1, 3)$?	No
7.	What is the area of a right triangle with height $\sqrt{50}$ and a base $\sqrt{32}$?	20
8.	What is the value $f(-1)$ if $f(x) = -12x^3 - 8x$?	20
9.	What is the surface area of a closed box with side dimensions 3 by 2 by 2?	32
10.	How many ways are there to make 15 cents using at pennies, nickels, and dimes?	6
Tie Breakers		
1.	If a number is 5 more than twice itself, what is the number?	-5
2.	Two fair dice are rolled. What is the probability that exactly one is odd and exactly one is six!	$\frac{1}{6}$ or 1:6