Mount Rainier Math Invitational
Sixth Grade – January 28, 2005
"Who Wants to be a Mathematician"
written by Ben Mitchell, Alan Mak, Tony Chick

Put all answers on the colored answer sheet. Any wrong answer will result in the loss of all points after the last "safe" zones – after questions 4 and 8. If you do not know an answer, you may safely skip the question by answering "LL" to at most two questions. You do not receive credit for a "LL" but it does not count as a wrong answer.

	Problems 1 through 4 are worth 1 point each
1	How many sides does a triangle have? A) 1 B) 2 C) 3 D) 13
2	What is 7*11? A) 18 B) 77 C) 71 D) 17
3	If Bri has 6 green apples, 9 red apples, and 1 yellow apple, how many total apples does she have? A) 12 B) 30 C) 16 D) 22
4	Evaluate: 7+3*5-1 A) 49 B) 40 C) 21 D) 8
	Problems 5 through 8 are worth 2 points each
5	Mak decides to go hunting for "snitches." If he catches 3 of every 11 snitches when he goes hunting, how many snitches will he catch if he sees 6798 snitches? A) 2492 B) 1854 C) 1855 D) 1492
6	Ben has a perfectly square pizza with a side of 1.7 feet. What is the area of the pizza that Ben is about to devour, rounded to the nearest tenth of a square foot? A) 1.7 B) 2.89 C) 3 D) 2.9
7	Tony is trying to write out the sentence "Pi is three." Ignore the period and capital letters, how many ways could he *incorrectly* write the sentence, assuming he gets the correct letters in each word, and the word order is the same? A) 19 B) 119 C) 239 D) 90719
8	What is the 47^{th} number in this sequence: 1,2,3,4,5,6,7,8,9,10,12,13,14,15, 16,17,18,19,20,21,23…? A) 47 B) 43 C) 55 D) 51

	Problems 9 through 11 are worth 3 point each
9	Jon, Keyes, and Johnson each toss a fair coin and then Jon rolls a fair 7-sided die. What is the probability that they get two heads and a tails, and that Jon rolls a 4 or 5 on the die? A) 3/28 B) 1/2 C) 1/24 D) 5/8
10	What is the area of an isosceles trapezoid the bases of 10 and 18 and other sides that are both 5? A)42 B)40 C)52 D)50
11	Ben, Mak, Tony, and Neff are having a race around a 1-mile circular track. Ben runs at a speed of 10 miles per hour, Mak runs at a speed of 7 miles per hour, Tony runs at a speed of 6 miles per hour, and Neff walks at a speed of 2 miles per hour. Ben runs all the way around the track. Mak, never wanting to lose, runs the first quarter mile, cuts straight across the field in the middle, and runs the last quarter mile. Tony runs half and then quits. Neff walks one-tenth of a mile straight back from the starting line, gets in his car, then drives back to the track and drives around the track at a speed of 40 miles per hour. Who reaches the finish line first? A) Mak B) Ben C) Tony D) Neff
	Problem 12 is worth 4 points
12	Mak rolls two fair six-sided dice. Tom noticed that at least one of the die showed a six. What is the probability that the sum was a multiple of 3. A) 1/4 B) 3/11 C) 4/11 D) 1/3