Mount Rainier Math Invitational
Sixth Grade – January 27, 2006
Team Algebra Test
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Put all answers on the colored answer sheet. All fraction answers must be reduced.
You should leave appropriate answers in terms of π.

	Problems 1 through 5 are worth 2 points each
1	If a=2, b=5 and c=-4, what is ab – ac + bc?
2	What is the point of intersection of the lines y=2x-1 and x+2y=8?
3	Robert is asking a girl out. In response, she will say yes, say no, or slap him. There is a 2/5 chance of her saying no, and a 1/3 chance of him being slapped. What is the probability that she will say yes? Express your answer as a common fraction?
4	Find the 17th number in the sequence 5, 9, 13, 17, …
5	Micaiah and Robert play Warcraft from 9:00pm until 10:30pm. If Robert kills one monster every three minutes, and Micaiah kills seven monsters for every five that Robert kills, how many monsters did they kill all together?
	Problems 6 through 10 are worth 3 points each
6	If 5x-7 = x+3, what is x^2 expressed as a decimal to the nearest tenth?
7	Roysch is writing a program. If he pushes a wrong button twice every minute and has to press the "delete" key to fix it, and it takes 2000 presses for the delete key to stop working, how many hours will it take until Roysch's "delete" key stops working? Assume Roysch doesn't stop to eat or sleep while he is programming. Express your answer as a mixed number fraction.
8	The amount of girlfriends Andrew has is (c^3-8)/14, where c equals the number of computers he owns. If Andrew owns four computers, but then half of girlfriends break up with him, how many girlfriends does he currently have?
9	There are penguins and polar bears in the Coca-Cola commercial. If a skeptical viewer (who knows that penguins and polar bears live on opposite poles) counts 54 feet and 20 heads, how many penguins are there in the commercial?
10	What is the largest prime factor of 2006?