Geometry/Combinatorics Individual Test

Interlake Invitational Math Competition
3/14/2015

General Instructions

Calculators or any other computational aids may not be used on any portion of the contest. The only allowed materials are writing utensils (pens, pencils, etc.), compasses, rulers, and protractors.

Express all rational, non-integer answers as reduced common fractions. All radicals must be simplified and all denominators must be rationalized. Leave all answers in terms of π where applicable. Do not round any answers unless stated otherwise.

The point value of each problem is given by the bold number in brackets next to the question number.

Individual Test: Geometry/Combinatorics

40 minutes, 10 problems, 40 points max

When you are prompted to begin, tear off this answer sheet and begin testing. Make sure your full name, school, team number, and room number are recorded on the answer sheet. Record your answers on the score sheet. No talking during the test. You will be given a 5 minute time warning. Participants are not expected to be able to solve all problems.

Name ____Answers_____

School _____

Team Number _____   **Room Number** _____

	Answer	Points Awarded	Points Awarded
1	**5040**	3	3
2	**1/6**	3	3
3	**(11/3, -1/3)**	3	3
4	**252**	3	3
5	**5/2**	4	4
6	**4/7**	4	4
7	$\mathbf{6 - 3\sqrt{3}}$	4	4
8	**105**	5	5
9	**30**	5	5
10	**480/289**	6	6

Score 1: 40   Score 2: 40