



WSMA Math Bowl - March 29, 2014
College Bowl Round 1 Proctors' Answer Sheet

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| 1 | What is the length of the largest side in the smallest non-degenerate triangle, by area, that has distinct integral side lengths? | 4 |
| 2 | What is the product of the first 4 triangular numbers? | 180 |
| 3 | It is 20 past 4. What is the angle formed by the minute and hour hand? | 10 |
| 4 | Andrew is on his moped on a road with no speed limit, and his position is a function of time described by the equation $p = (50t^2)/3$, where t is the number of hours he has been traveling. Find his average speed if he travels for 6 hours. | 100 |
| 5 | What is the median of the following set: $\{0, \pi, 3, 3.14, 3.1415, 3.141592\}$? | 3.1415 |
| 6 | Given 4 lines on a plane, what is the maximum number of intersections that can be made? | 6 |
| 7 | What is the sum of all the composite factors of 24? | 54 |
| Extra | What is the positive difference in length between the longest line that can fit in a 1 inch by 1 inch by 1 inch cube and the longest line that can fit in a 1 inch by 1 inch square? | $\sqrt{3} - \sqrt{2}$ |