UK University Integration Bee Marking Instructions

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Introduction

Thanks for agreeing to help mark the UK University Integration Bee Round 2! Your help is really appreciated and integral to making the competition run smoothly.

1 How the competition will work

Round 2 is split into 3 rounds; a group round, a crossnumber round and a shuttle round - for those of you who did UKMT's Senior Team Maths Challenge that would be familiar. You can find examples of each round on the website too. The way each of these works is as follows:

1.1 Group Round: 1 hour

This works the same as Round 1 but on a smaller scale. Each team will be given 10 problems and an hour to try get as many solutions together as possible - the problems vary in difficulty and the distribution of difficulty is random.

1.2 Crossnumber Round: 20 minutes

In this round, the aim is to fill as many squares on a crossword correctly with the answers as integers instead of words. The team splits into two - here that would be one pair and one on their own - one half gets across clues and the other half gets down clues. Some of these you can do straight away, some of them you'll need to fill in numbers from other clues and some of them depend explicitly on other clues - both across and down ones.

No communication is allowed between the two halves of the team other than asking them to do a certain question e.g you might be working on 8 DOWN which requires 1 ACROSS - you can ask the other half to work on 1 ACROSS. Your answers will be checked as you go, 1 mark for each correct digit. It's best to enter one digit at a time in case you mess up instead of checking the whole number at once.

1.3 Shuttle Round: 4x8 minutes

In this round, teams stay split in the groups they were in. Here, each shuttle consists of four questions, the first and third being given to one pair and the second and fourth being given to the other. Each answer is passed onto the other team to be used as a variable in the next and this goes back and forth until the end.

Your answers will be checked either at the end of the 8 minutes or whenever you're ready to have them be checked. If you get one right the first time, you'll be awarded 3 marks; any later attempts will be awarded 1 mark. You can attempt any question as many times as you like. If you manage to complete the whole set in under 6 minutes, you'll be awarded 5 bonus marks too :)

2   Guidance on how to mark

Here's advice on how to mark each round!

2.1   Group Round

In this one, at the end when they have written down all their answers, I'll provide a sheet with the answers which you can just check. For the rest of the round, you don't need to be doing anything so feel free to go on your phone, study etc. There are some indefinite integrals; marking those is a bit complicated so you can leave those out, pass the answer sheet on to me and I'll mark it :) Each question is worth 8 marks.

2.2   Crossnumber Round

This is the most involved round to mark. Shortly before the event takes place, I'll send the completed crossnumber. To mark this, the team will say they want to submit an answer e.g '8 ACROSS'. Then they will either give the answer one digit at a time or all at once. If it's one at a time, mark each digit at a time, if it's all at once, mark all of them in a row.

Each half of the team has a copy of the crossnumber. When one of the halves submits an answer, write down the correct digit and put a little tick next to it if they submitted the right one. If they submit a wrong digit, put the correct one down on their crossnumber and put a cross next to it. The total marks at the end is the number of ticks.

2.3   Shuttle Round

The shuttle round is marked like the group round but at a quicker pace. Whether the team submits their answers before the end or the time is up, mark each of the answers they submitted - 3 marks for being correct on the first attempt and 1 if its on any later attempt. If they get all 4 of them within 6 minutes then they get an extra 5 bonus marks. The final score at the end is the sum of the scores on each shuttle.