

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 relay 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: 40 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. One half is made easier so this is ideal for the one on their own.

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 Relay Round: 45 minutes

In this round, teams go back together. Here there will be 20 problems to attempt. They'll be given to the entire team to solve, one at a time. A correct answer will be given three marks and any subsequent attempt will be worth one mark. If you can't solve it you can skip it, whether you solve it or skip it, you'll move onto the next question until you finish them. You cannot go back to any previous question. Should you finish 10 or more questions, you get a β , worth 5 extra marks. Should you get 15 or more questions, your β is upgraded to an α , giving you 10 more marks overall, bringing the max to 70 possible.

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. 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 Relay Round

The Relay round is marked each question at a time when they submit an answer - 3 marks for being correct on the first attempt and 1 if its on any later attempt. They can also skip a question, in which case they can't come back to it. If they get 10-14 questions overall, they get an extra 5 points, if they get 15 or more they get an extra 10 marks.