

2022 Integration Bee Official Rules

1. Competition is open to all WVU students, and to high school students in the Morgantown, WV area. Please bring a school photo identification card to verify university or high school status.
2. All integrals in the competition are indefinite or proper definite integrals of a single variable, solvable by techniques of Math 156 (Calculus 2). Correctness is determined by judges whose decisions are final.
 - (a) Answers must be boxed or circled.
 - (b) Final answers may not be expressed in terms of other integrals.
 - (c) Definite integrals must be evaluated.
 - (d) Correct answers must include "+C", if appropriate, where C is an arbitrary constant.
 - (e) Absolute values, if required, must be present.
 - (f) All substitutions must be undone; solution must be in terms of the original variable.
 - (g) No partial credit is given.

3. The competition consists of a qualifier round (**March 23 at 6 p.m. in Armstrong Hall 209**), and finals (**April 6 at 6 p.m. in Armstrong Hall 209**).

The qualifier round. The qualifier round consists of a 40 minute written test of 30 integrals. Top 16 scores compete in the finals. In the event of ties, tie breaker is performed. Only writing tools are allowed in the exam (notes, books, calculators or consulting other people are not allowed at any time during the competition).

The finals. The finals consist of a four-round single-elimination tournament. Competitors face off in pairs, solving integrals at the blackboard. The integrals are projected onto a screen along with a timer. The integrals become more challenging as the contest progresses to higher rounds. When a competitor circles or boxes a solution, the clock is stopped, and the judges consider it. If the solution is correct, the competitor proceeds to the second round, while the other is eliminated. If the solution is incorrect, the clock resumes, and either competitor may present a solution in the remaining time. If neither contestant gives a correct solution within the allotted time, both start with a new integral.

- (a) **Round 1.** The sixteen successful competitors have a first-to-one-integral elimination. The time allotted is 2 minutes.
 - (b) **Round 2.** The eight successful competitors proceed to round 2 to compete in first-to-one-integral elimination. The time allotted is 2 minutes for each integral.
 - (c) **Round 3.** The four successful competitors proceed to round 3 to compete in first-to-two-integrals elimination. The time allotted is 3 minutes for each integral.
 - (d) **Round 4.** The two remaining competitors then square off in the championship round, where the first to correctly solve two integrals is declared the winner. The time allotted is 4 minutes for each integral.
4. Rules are subject to change without notice and may be amended as needed per announcement before or at the competition.

Prizes

Winner, runner-up and best high school performance will receive \$200, \$100 and \$50 WVU Bookstore certificates.

Contact

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