



Girls in Math 2026
Tiebreaker Round

NAME

1.

2.

- 10 minutes
- Positive integer answers
- One submission, submit anytime
- Ties broken by score then time
- No calculators
- Write answers INSIDE the box

1. A bee and a flower are a distance of $\frac{14}{15}$ apart on the same side of a unit square, and the bee is a distance of $\frac{1}{150}$ from the nearest vertex of the square. The length of the shortest path that the bee can take to reach the flower that touches all four sides of the square at least once can be expressed as $\frac{m}{n}$, where m and n are relatively prime positive integers. Find $m + n$.
2. The polynomial $x^5 - 4x^4 + 2x^3 - 3x^2 + x + 1$ has 3 real roots and 2 pure imaginary roots. If the real roots are a, b , and c , find $abc - (3 - a)(3 - b)(3 - c)$.