

${\rm The\ Thirteenth\ Annual}\\ Utah Math Olympiad$

Saturday, March 29, 2025 1:00 - 4:00 pm

Participation is free! Prize money is available for the top scorers.

For more information and to register, visit www.utahmath.org. Please register by March 22. Contact us at contact@utahmath.org.

Sample Problem

Two circles are drawn with centers at the acute angles of a right triangle, both going through the right angle of that triangle. These circles split the hypotenuse into three segments which are colored blue, green, and yellow, with the green segment in the middle.



Two ladybugs land at points chosen independently and uniformly at random along the hypotenuse. Show that the following two scenarios are equally likely:

- Both ladybugs land on the green segment.
- One ladybug lands on the yellow segment, and one ladybug lands on the blue segment.

Location:

The Waterford School Math Building (400) Library