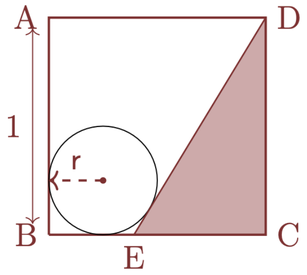
MATH PROBLEM OF THE WEEK

Fall 2024

Problem 7

In the following diagram a circle of radius r is inscribed in a square ABCD with sides of length 1 unit, so that the sides AB and BC are tangent to the circle. Then we draw a straight line from D to a point E on BC so that DE is also tangent to the circle. Find the area of the triangle ΔCDE as a function of r.



We welcome solutions from everyone. The undergraduate participant from the NMSU main campus with the most correct solutions at the end of the semester will receive an award of $500.

Solutions must be mathematically rigorous and originally obtained by the participants.
Participants will be notified if their solutions are correct within a week.

Deadline: Monday, November 11, 10 am

Next problem will be posted on November 11

Send solutions to: mathpotw@nmsu.edu

More information at: https://math.nmsu.edu/activities/math-problem-of-the-week.html