## Pi Mu Epsilon Problem of the Month March 2019

Consider a square, around which is its circumscribed circle (the circle that passes through all of the square's vertices). Then, four semi-circles are constructed, one for each side of the square and using each side of the square as a diameter.


Find the difference between the area of the square and the total area of the green lunes.

Problem of the Month Rules:
H Submissions must include a complete mathematical justification along with the answer.
H Submissions may only be made by individuals or groups of two and must be dated.
H Due date: March 26, 2019 before 5 p.m.; they may be given to Dr. Phillip Poplin or Dr. David Shoenthal.
To get your own copy, please visit: http://www.longwood.edu/mathematics/

