## Pi Mu Epsilon Problem of the Month October 2018

Consider a three-by-three grid. What is the total number of ways to place four coins on the grid so that the following conditions hold?
a) Every row of the grid contains at least one coin.
b) Every column of the grid contains at least one coin.
c) No square in the grid contains multiple coins.


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.
$\mathscr{H}$ Due date: October 26, 2018 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/

