



UNIVERSITY OF WISCONSIN
PLATTEVILLE
DEPARTMENT OF MATHEMATICS

PROBLEM OF THE WEEK #9
(Spring 2017)

You've just become head coach of the Pioneer football team. Things aren't looking good: you're trailing UW-Whitewater 14–0 in the fourth quarter. Suddenly, the Warhawks fumble — it's recovered by the Pioneers, and returned for a touchdown, with 1:24 left in the game! The score is 14–6. Should you kick the extra point, or go for two?

Details: Suppose that your kicker always makes extra points; let p be your team's success rate on two-point conversions. Which choice gives the Pioneers a better chance of winning the game? Assume that there's not enough time left for more than one more score before the game ends, and that the teams are equally likely to win if the game goes into overtime. Your choice of strategy should depend on the value of p .

[Please fully explain your answer.]

Solutions should be submitted to Cinda Furry, in Gardner Hall 435, by 4:00 P.M. on Wednesday, April 5, 2017.

Every week, the best solution submitted earns a \$10 Platteville gift certificate; the top scorer each semester also wins a cash award. Good luck!

You can always see the Problem of the Week (and complete rules) online at:

<http://uwpmath.weebly.com/>