

MATH 290 NUMBER THEORY FOR TEACHERS

PROBLEM OF THE DAY # 4

DUE: JANUARY 24, 2014

1. Thinking about football again, what if instead of keeping track of each team's score, we keep track of the *difference* between the two scores? Assuming teams can score either 7 or 3 points at a time, what is the smallest positive difference between scores?
2. What if the game were such that teams scored 8 or 5 points at a time? What about if teams scored 14 and 8 points at a time? Can you predict, given a and b in \mathbb{N} , what the smallest positive difference between the scores will be?