

Math 240, Quiz 4

Name:

Circle One: T 12:05 T 2:25 R 12:05 R 2:25

Instructions: Answer all questions fully, showing work where necessary.

1) Compute each of these sums:

a) $\sum_{j=0}^8 (2 \cdot 3^j + 3 \cdot 2^j)$

b) $\sum_{i=1}^3 \sum_{j=1}^3 (i - j)$

2) Use mathematical induction to show that 6 divides $n^3 - n$ whenever n is a nonnegative integer.