

Below are the first few assignments after the third test.

- A handout on mathematical induction is available online at <http://www.ms.uky.edu/~rbrown/courses/ma113> This supplements the material in Stewart.
- Homework G. Due Monday, 19 November 2001

1. Compute

$$\sum_{k=1}^n (2k - 1) \quad \text{for } n = 1, 2, 3, 4, 5.$$

2. Guess a simple formula which gives the value of the sum

$$\sum_{k=1}^n (2k - 1).$$

(You may want to try a few more values of n in the first part.)

3. Use mathematical induction to prove that the guess you made in the previous problem is correct for all values of n .
4. Use the formula

$$\sum_{k=1}^n k = \frac{n(n+1)}{2}$$

and Theorem (2) on page 259 of the text to provide another way of computing the sum

$$\sum_{k=1}^n (2k - 1).$$

- Homework 12. Due Tuesday 20 November 2001. Late papers will be accepted for full credit on Wednesday, 21 November. §4.2 #2, 24. §4.3 #18, 24, 34.

November 8, 2001