

# Homefun 18

## It DOES Add up!

MATH 150  
10 points

**Directions:** Work in groups of 2 to 4 in class and then finish outside of class as necessary. Each group should submit **ONE** solution page for the group. (Be sure everyone's name is on it!)

The purpose of this assignment is to practice working with Riemann sums and Sigma-notation.

1. Compute each sum.

$$(a) \sum_{k=1}^{15} k^2 - 3k$$

$$(b) \sum_{k=1}^n \left( \frac{k}{4n} + 3 \right) \frac{4}{n}$$

2. Express each sum in  $\Sigma$ -notation.

$$(a) 1 + \frac{1}{4} + \frac{1}{9} + \frac{1}{16} + \dots + \frac{1}{400}$$

$$(b) \sqrt{5} + \sqrt{10} + \sqrt{17} + \dots + \sqrt{101}$$

$$(c) 3 + 9 + 27 + 81 + 243 + 729$$