

1. Apply the method of Antiderivatives to find the area under the curve of  $y = t^2 + 4t$  from  $t = 1$  to  $t = 4$
2. Do the same for  $y = t^2 - 8t$ . Why doesn't your answer make any sense, and what do you suppose happened?

3. Write in expanded form:  $\sum_{k=1}^5 (-1)^k k$

4. Write in expanded form:  $\sum_{k=1}^5 3k$

Factor out the 3 from each term and show that this is equal to  $3 \sum_{k=1}^5 k$

5. Add:  $\sum_{k=1}^n k$