Algebra Review 2: Summations
Solutions

Section 1: Evaluate the Sums
1. 125
2. 86
3. 126
4. $n$
5. $\frac{n(n+1)}{2}$
6. $\frac{n(n+1)(2n+1)}{6}$

Section 2: Rewrite as a single Sum
1. $\sum_{k=1}^{10} k^2$
2. $\sum_{i=1}^{10} e^{3i}$

*Note: the particular letter you use for the index of summation does not matter*

Section 3: Rewrite in summation form
1. $\sum_{k=1}^{n} \left( \frac{1}{k} \right)$
2. $\sum_{k=0}^{n} \left( \frac{1}{2^k} \right)$
3. $\sum_{k=0}^{7} k!$