General Algebra 2 Worksheet \#6 Unit 10 page 1
Solve each of the following problems. Show your work neatly organized.

1. Find the sum of the first $\mathbf{1 0 0}$ terms of an arithmetic sequence in which $a_{1}=5$ and $d=3$.
2. Find the sum of the first 50 terms of the sequence defined by $a_{n}=10 n-5$.
3. Find the sum of the first 75 terms of the sequence defined by $a_{n+1}=a_{n}+6$ where $a_{1}=20$.
4. Find the sum of the first 40 terms of the sequence $2,2.2,2.4,2.6, \ldots$
5. Show that the sum of the first $n$ terms of the sequence $1,3,5,7, \ldots$ is equal to $n^{2}$.
6. Evaluate the series $1+4+7+10+\ldots+100$.

## General Algebra 2 Worksheet \#6 Unit 10 page 2

Solve each of the following problems. Show your work neatly organized.
7. Evaluate: $\sum_{i=1}^{50}(2 i+3)$
8. Evaluate: $\sum_{i=1}^{40}(4 i-1)$
9. An object accelerates in such a way that it travels $\mathbf{1 0}$ feet during the first second, $\mathbf{1 5}$ feet during the next second, and 20 feet during the third second. If this pattern continues, then how far will the object have moved during the first ten seconds?
10. A job has a starting salary of $\$ 12,000$ with a guaranteed increase of $\$ 450$ per year. Find the total salary for the first ten years.

