Algebra 2H **Extra (Fun*) Problems** **Sections 11.1, 11.2**

1. Write the series in $\sum$ notation.

a) $2 + 5 + 10 + 17 + 26 + 37$

b) $\frac{1}{4} - \frac{1}{9} + \frac{1}{16} - \frac{1}{25} + \ldots$

2. -296 is which term of the sequence 7, 4, 1, . . . ?

***3. Find a rule for the *n*th term, in terms of *x*, for the sequence** $2x + 1, 3x + 3, 4x + 5, \ldots$

***4. <u>Arithmetic means</u> are terms in an arithmetic sequence between two given terms. Insert 5 arithmetic means between 2 and 62.**

***5. <u>Use an arithmetic sequence</u> to find the number of multiples of 7 between 50 and 500.**

6. Write the series $10 + 12 + 14 + \ldots + 50$ in summation notation.

7. Find the sum of the series $82 + 79 + 76 + \ldots + 46$.

8. Find the first 3 terms of an arithmetic sequence where $a_{25} = -151$ and $S_{25} = -1975$.

***9. Find the sum of the positive 3-digit integers divisible by 6.**

***10. Find a formula, in terms of n, for the sum of the first n odd counting numbers.**