Algebra 2 Honors Extra Fun Problems 11.2 &11.3
WS 11B

1. Find the sum of all positive 2-digit integers that are not divisible by 3.

2. Write the tenth term of the sequence $2, 2\sqrt{3}, 6, \ldots$ in simplest form.

3. Which term of the sequence $2, 10, 50, \ldots$ is 3,906,250?

4. Geometric means are terms between two given terms of a geometric sequence. Insert 4 geometric means between $\frac{2}{3}$ and 162.

5. Write in summation notation: $3 - 0.3 + .03 - .003 + \ldots$

6. The first 3 terms of a geometric sequence are x, $x + 2$, and $2x + 1$. Find all possible values for a_1, a_2, and a_3.

7. A new car purchased for \$35,000 loses 15% of its value each year. After how many years will its value be half of its original value? (round answer to the nearest tenth)

8. Find the sum of the first ten powers of 5.

9. Find the exact sum in simplest form (no decimal): $\sum_{k=1}^{8} \left(\frac{1}{3}\right)^{k-1}$

10. Find the sum of the series $-8 + 4 - 2 + \ldots - \frac{1}{32}$.