

Name: _____ Period: _____ Date: _____

Geometry: Open Response

ALL work must be done in the grid below.

1. Find the next three terms of the sequence: 6, 6.25, 6.5, ...
2. Find the formula for the n th term of this sequence.
3. Find the 30th term for the sequence 6, 6.25, 6.5, ...
4. Find the sum of the first 30 terms of the sequence 6, 6.25, 6.5, ...
5. A famous mathematician named Abraham De Moivre thought that he should sleep 15 minutes (.25 of an hour) longer each night and from this arithmetic progression he calculated that he would die on the day that he slept 24 hours. (And he was right, he did die.) If De Moivre started his arithmetic progression (sequence) with 6 hours of sleep a night, how many days after saying this did he live?

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.