Quang Huynh

28. For an arithmetic series that sums to 1,485, it is known that the first term equals 6 and the last

term equals 93. *Algebraically* determine the number of terms summed in this series.

1485=n/2(6+93)

1485=n/2(99)

2970=99n

N=30

29. Arlington High School recently installed a new black-box theatre for local productions. They

only had room for 14 rows of seats, where the number of seats in each row constitutes an

arithmetic sequence starting with eight seats and increasing by two seats per row thereafter.

How many seats are in the new black-box theatre? Show the calculations that lead to your

answer.

8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34

14/2(8+34) = 7(42) = 294 seats

30. Simeon starts a retirement account where he will place $50 into the account on the first

month and increasing his deposit by $5 per month each month after. If he saves this way for

the next 20 years, how much will the account contain in principal?

20\*12=240

S=240/2(50+1245) a=50+(240-1)(5)

S=120(1295) A=50+1195

S=$155,400 A= 1245

32. A large grandfather clock strikes its bell once at 1:00, twice at 2:00, three times at 3:00,

etcetera. What is the total number of times the bell will be struck in a day? Use an arithmetic

series to help solve the problem and show how you arrived at your answer.

S=24/2(1+12)

S=12(13)

S=156