# Arithmetic Sequence and Series Word Problems

1. There are 125 passengers in the first carriage, 150 passengers in the second carriage and 175 passengers in the third carriage, and so on in an arithmetic sequence. What's the total number of passengers in the first 7 carriages?

2. A writer wrote 890 words on the first day, 760 words on the second day and 630 words on the third day, and so on in an arithmetic sequence. How many words did the writer write in a week?

3. Jerry deposited $20,000 on an investment that will give $1,750 for every year that his money stays in the account. How much money will he have in his account by the end of year 8?

4. There is a stack of logs in the backyard. There are 15 logs in the 1$^{st}$ layer, 14 in the second, 13 in the third, 12 in the fourth, and so on with the last layer having one log. How many logs are in the stack?

5. A theatre has 30 seats in the first row, each row behind it gains three additional seats. How many seats are there in the 15$^{th}$ row?

6. In his piggy bank, Dave dropped $1.00 on May 1, $1.75 on May 2, $2.50 on May 3 and so on until the last day of May.

   a) How much did he drop in his piggy bank on May 19?

   b) What was his total deposit in his piggy bank for the month of May?

7. There are 20 rows of seats on a concert hall: 25 seats are in the 1st row, 27 seats on the 2nd row, 29 seats on the 3rd row, and so on.  If the price per ticket is $230, how much will be the total sales for a one-night concert if all seats are taken?

8. Sonia has 55 blocks. She decides to stack up all the blocks so that each row has one less block than the row below.  She wants to end up with just 1 block on top.  How many should she put in the bottom row?

9. A tube well is bored 800 meters deep. The 1st meter costs $250 and the cost per meter increases by $50 for every subsequent meter. Determine the total cost incurred for the entire job.