

MASSACHUSETTS MATHEMATICS LEAGUE
FEBRUARY 2006
ROUND 6 ALGEBRA 2: SEQUENCES & SERIES
ANSWERS

A) _____ minutes

B) _____

C) _____

- A) Sal gets 4 hours of homework every school night. On day 1 he is exceptionally motivated and does all his homework. However, on each successive school night he does only half as much homework as he did on the previous school night. At the end of the school year (180 days) to the nearest minute, how much total homework will Sal have done?
- B) For an arithmetic sequence a , we find a_{2006} is twice a_{2004} and a_{2006} is 500 more than three times a_{2000} . Find a_{2005} .
- C) The sum of the first three terms of a geometric series is 296, while the infinite sum is 80 less than twice that amount. Find the fifth term of the series.