

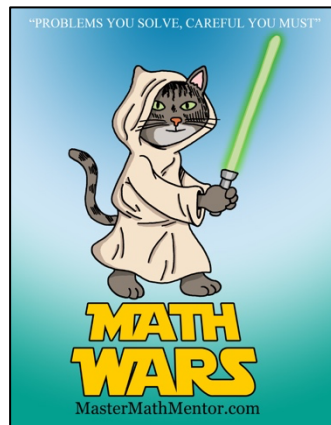
Math Wars – SAT/ACT

Topic 519 – Sequences

Maximum Time: 7 Minutes



Directions: To start, you need to download the Math Wars application on your cell phone: Use the QR code or the url: <https://mastermathmentor.com/mmm/mathwars.ashx?key=519>



When ready, start the timer and then solve the problems below, entering your choice, A, B, C, D and pressing for each problem when you are sure of your answer. When complete, stop the timer. You will see problems you got correct in green and incorrect in red. You will receive a score based on how many problems you got right and your time. A perfect score is all problems correct using half the maximum time or less. You can text or email your friends with your results.

- (1 pts) How many terms are in the sequence 9, 18, 36, ... 4608
 - 8
 - 9
 - 10
 - 11
- (3 pts) Ted purchases a truck for \$50,000. The car depreciates in value 12% a year. What percentage of its original value did it lose in depreciation?
 - 12%
 - 46%
 - 54%
 - 59%
- (5 pts) The fourth term of an arithmetic sequence is -11 and the 9th term is -36 . Find the first term.
 - -4
 - 5
 - 1
 - 4
- (7 pts) The first and second terms of a geometric sequence are 3 and $6i$. What is the sum of the first 6 terms?
 - $63 + 126i$
 - $39 - 78i$
 - $39 + 78i$
 - $39 - 126i$
- (9 pts) A runner injured his knee and had to have knee replacement surgery. For rehabilitation purposes, he was told to jog 10 minutes a day for a week (5 days). The rehab calls for increasing his time 6 minutes a day for each week. If he averages $\frac{3}{4}$ miles for every 8 minutes run, how far does he travel just in week 6?
 - 18.75 miles
 - 20 miles
 - 21.25 miles
 - 35.16 miles