NEW ENGLAND MATHEMATICS LEAGUE

P.O. Box 6, Sharon, Massachusetts 02067-0006

All official participants must take this contest at the same time.

Contest Number 1

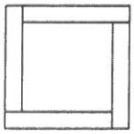
Any calculator without a QWERTY keyboard is allowed. Answers must be exact *or* have 4 (or more) significant digits, correctly rounded.

October 18, 2016

Name _____ **Teacher** _____ **Grade Level** ____ **Score** ____

Time Limit: 30 minutes

NEXT CONTEST: NOV. 15, 2016

		Answer Column
1-1.	What is the greatest common divisor of 2016 and 2017?	1-1.
1-2.	If the 3-digit number $1A7$ (where A is the tens digit) is divisible by 3, but not by 9, what are all possible values of A?	1-2.
1-3.	When a small square is surrounded by 4 congruent rectangles in the manner shown, a larger square is formed. If the perimeter of each rectangle is 18, what is the area of the larger square? 	1-3.
1-4.	The length of one leg of right $\triangle T$ is the average of the lengths of the other two sides. If the perimeter of T is 1, what is T's area?	1-4.
1-5.	At my grandparents' dance party, each guest ate at least 1 almond. If each guest ate a whole number of almonds, no three guests ate the same number of almonds, and the guests ate at most 2600 almonds all together, then at most how many guests were at the dance party? 	1-5.
1-6.	In the five-term sequence 60, 20, 30, 40, 50 the least term is 20, the greatest term is 60, and the nth term is divisible by n. What is the least possible sum of all the terms of an eleven-term sequence of unequal positive integers whose least term is 12 and whose nth term is divisible by n?	1-6.