

## 2017-2018 Puzzle Contests

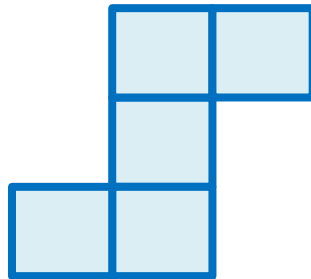
# Contest #4



### Grades 5up Puzzles:

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1. Cut the shape below into several parts and make a square from them.



**(25 points)**

2. In the RSM-MetroWest chess tournament each participant played with every other player, and 5% of the participants had no points at the end of the tournament. What was the number of chess players of that tournament? (In a chess tournament, a win in a game is awarded 1 point, a loss – 0 points, and a draw  $\frac{1}{2}$  points) **(35 points)**



3. Two players play a game named "Who calls the number 100 first". The first player calls any integer from 1 to 9 inclusive. The second adds any integer between 1 and 9 inclusive and calls the sum. Then the first adds any integer between 1 and 9, and calls the new sum again etc. The winner is the one who calls the number 100. What is the winning strategy in this game? Which player wins in it? **(40 points)**



Solutions deadline is March 18

Please submit your solutions to [anna.charny@metrowestschool.com](mailto:anna.charny@metrowestschool.com)  
or bring them to the office