

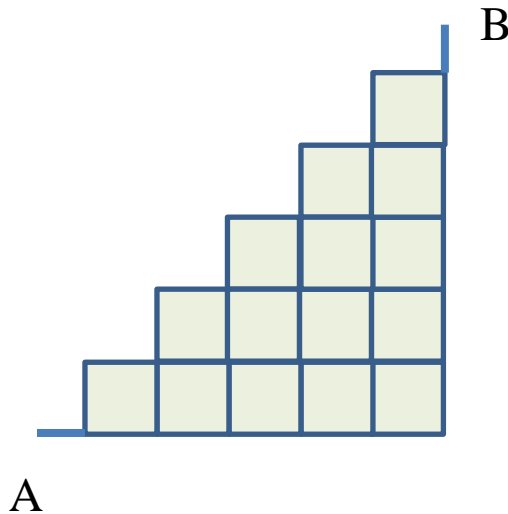
## 2017-2018 Puzzle Contests Contest #5



### Grades 5up Puzzle:

**1. The number of RSM-MetroWest students** who won individual awards at a math Tournament was between 2.7% and 3.2% of the total number of students on the RSM-MetroWest team. What could be the smallest number of students on the team? (25 pts)

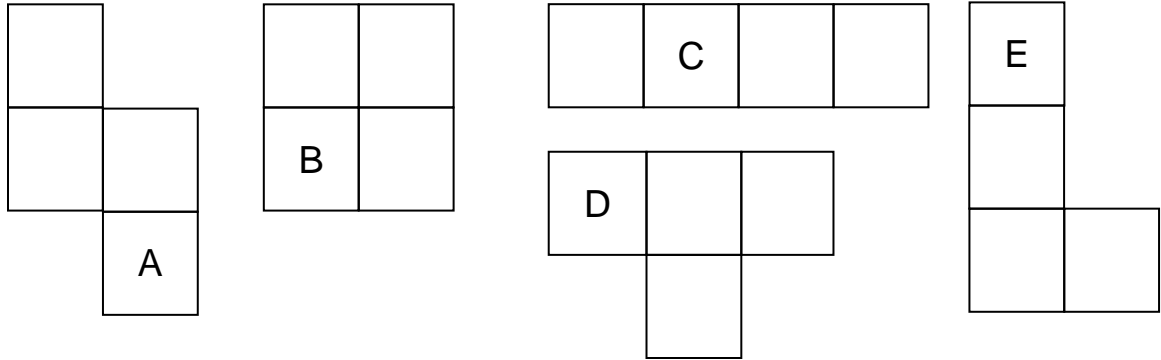
**2. Moving horizontally and vertically from point A** to point along the lines in the diagram below, how many routs are there from point A to point B consisting of six horizontal and six vertical moves? (35 pts)



Solutions deadline is May 20

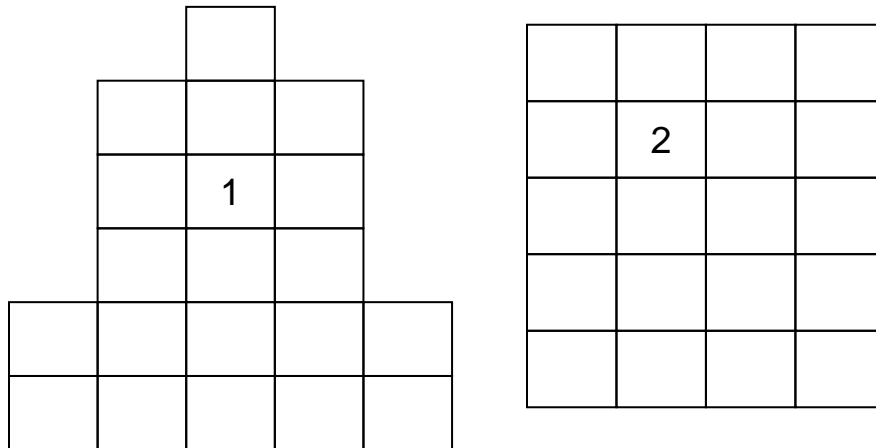
Please submit your solutions to [anna.charny@metrowestschool.com](mailto:anna.charny@metrowestschool.com)  
or bring them to the office

**3. An Architectural Firm received an order to cover the façade of a new house they are designing with** slabs of a very rare stone. Only five slabs are available, and here are their shapes:



The builders are not allowed to cut the expensive slabs, but the slabs are excellent on both sides, and so can be place either side up. They can be rotated in any way as well.

The architectural firm is considering two possible designs of the house as shown below (1 and 2).



If the firm is to satisfy the order and use all of the available slabs of the rare stone to cover the façade, which of the two designs should they choose, and why?(40 pts)

Solutions deadline is May 20  
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or bring them to the office