

Mathematics 1100Y – Calculus I: Calculus of one variable

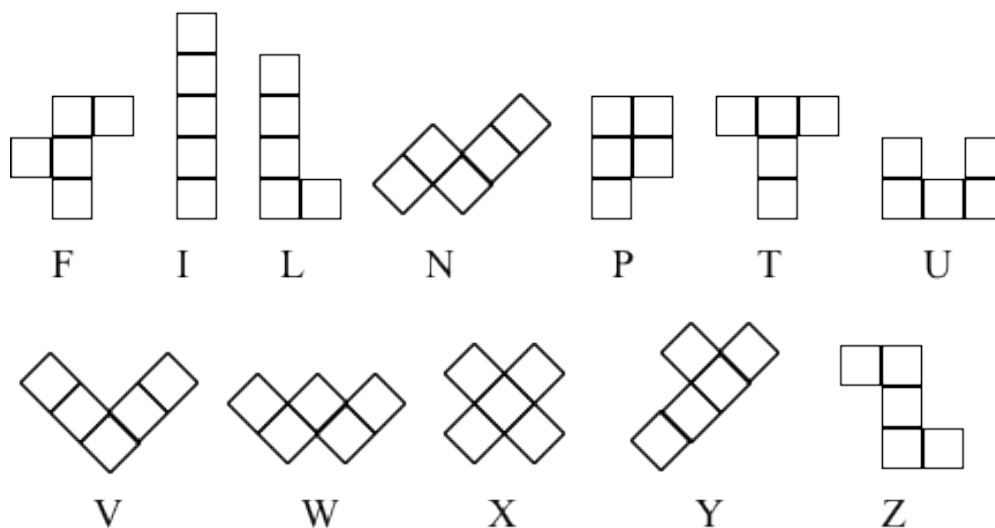
TRENT UNIVERSITY, Summer 2010

Solution to Assignment #4

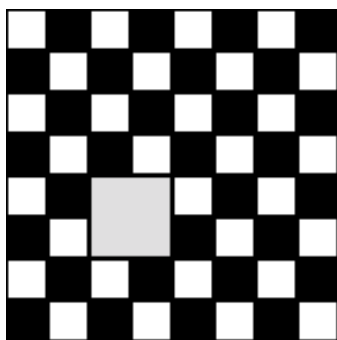
Pentominoes

Analogously to dominoes, the contiguous polygons formed by putting together five squares side-to-side are called the *pentominoes*, which are used in a number of puzzles. There are twelve of them (not counting the shapes that can be obtained from these by rotations or flips) and they are usually referred to by the Latin letter they most resemble in some orientation.

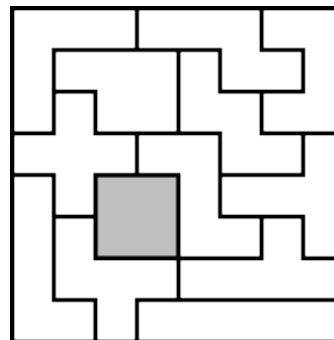
The twelve pentominoes and their names:



1. Cover a mutilated chess board such as that shown in the diagram below using each of the twelve pentominoes exactly one, in such a way that each square of each pentomino exactly covers one of the remaining squares of the board. [10]



A SOLUTION.



There are many other solutions ... ■

Note: You are allowed to rotate and flip the pentominoes, but not to take them apart, or to squeeze, bend, or otherwise distort them.