

Name:

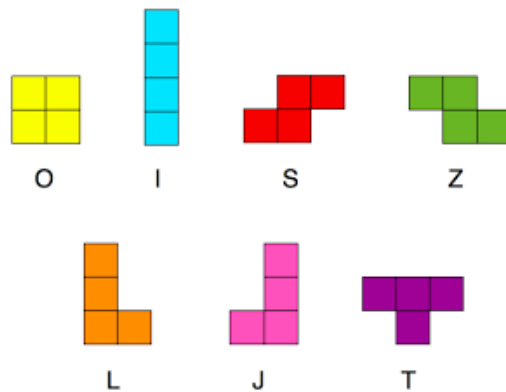
Date: Monday, November 28, 2016

MATH 181 F1 Worksheet: Tetris and Pentominos, Part 1

These seven tiles are called tetrominos.

They may look familiar; they are the blocks from Tetris.

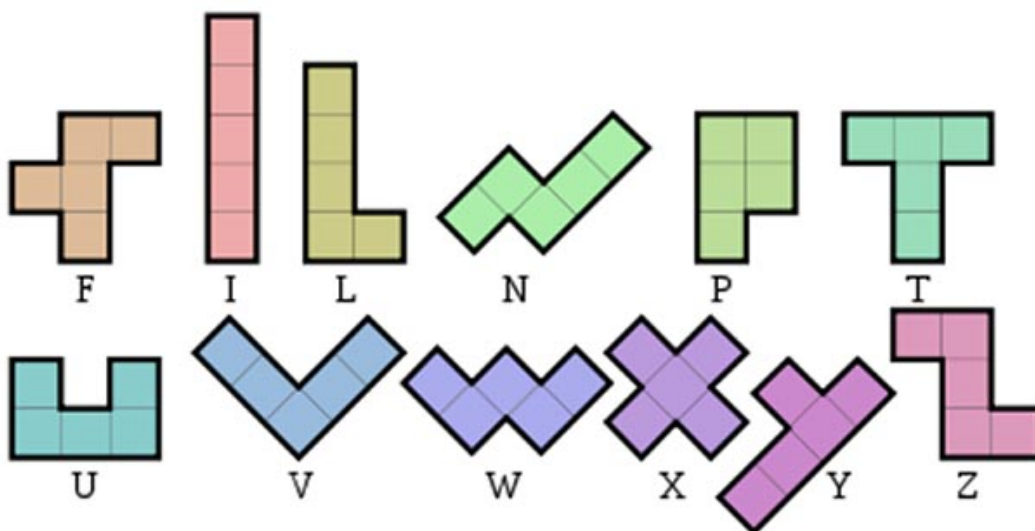
Just by experimenting, determine which can tile the plane by translations.



These twelve tiles are called pentominos.

Just by experimenting, determine which can tile the plane by translations.

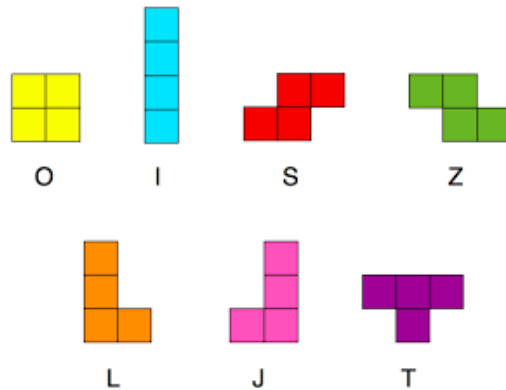
Hint: There are nine that do.



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MATH 181 F1 Worksheet: Tetris and Pentominos, Part 2

Using the Translation Criterion

Show rigorously that block O can tile the plane only by translations.
 Hint: Use part 1 of the translation criterion.

Show rigorously that block I can tile the plane only by translations.
 Hint: Use part 1 of the translation criterion.

Show rigorously that block Z can tile the plane only by translations.
 Hint: Use part 1 of the translation criterion.

Show rigorously that block L can tile the plane only by translations.
 Hint: Use part 2 of the translation criterion.

Show rigorously that block T can tile the plane only by translations.
 Hint: Use part 2 of the translation criterion.