

Pentominoes - Part 1

Pentominoes is the set of shapes created by combining 5 equal squares with sides touching each other, in every possible combination.



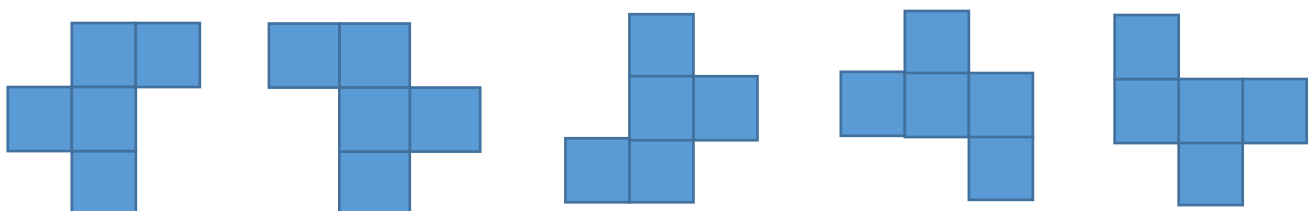
a) This is one way how to do it.



b) And this is the same pentomino rotated.

The diagrams below show another pentomino.

It is reflected (mirror image) and rotated however it is still the same pentomino.



Task 1

There are **12 possible shapes** in a set of unique pentominoes.

Draw all the pentominoes on squared paper.

(You can colour each one differently and cut them to use in Task 2 and Task 3)

Rotations and reflections are not considered to be different pentominoes.

Task 2

A set of pentominoes has 60 squares in all (12 pentominoes x 5 squares each).

A set of pentominoes can be tiled into a rectangle without overlapping or gaps.

Possible rectangles are:

1 x 60 2 x 30 6 x 10 3 x 20 4 x 15 5 x 12

- Make** one of these rectangles using only **one set of pentominoes**.
- Which 2** of the possible rectangles **cannot** be covered by a set of 12 pentominoes?
- Go crazy and **create** other shapes or diagrams with your set of pentominoes.