

# Pentominoes - Part 1 Answers

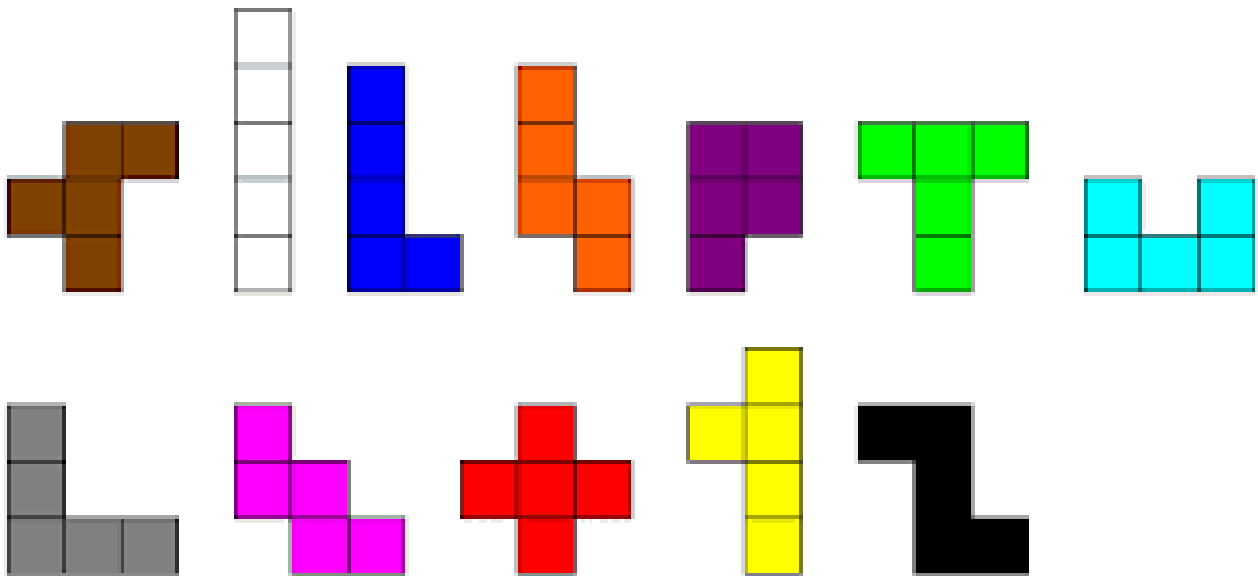
## Task 1

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.



**Note:**

- The '1 x 60' and the '2 x 30' rectangles cannot be covered with the 12 pentominoes since the 'T' and the '+' shape pentominoes are 3 units wide in every direction.
- There are various solutions to the other rectangles.
  - 3 x 20 rectangle has 2 different solutions
  - 4 x 15 rectangle has 368 different solutions
  - 5 x 12 rectangle has 1010 different solutions
  - 6 x 10 rectangle has 2339 different solutions.