

TRIANGLE PERIMETERS

Picture Puzzles

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Publisher ... Mathematics Centre
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This Picture Puzzle is based on
... Task 207, *Triangle Perimeters*
Teaching Notes
... mathematicscentre.com/picturepuzzles/teachingnotes.htm

Picture Puzzles

To Do

1. Learn to name Polyiamonds.
2. Measure the perimeter of Polyiamonds.
3. Tessellate with Polyiamonds.

You Need

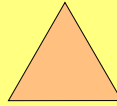
- Equilateral triangle shapes
- Triangle graph paper

Triangles or MiniGeofix



Polyiamonds are made from equilateral triangles.

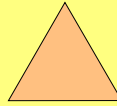
Moniamond



1 triangle

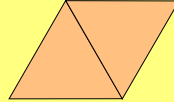
Picture Puzzles

Moniamond



1 triangle

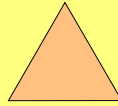
Diamond



2 triangles

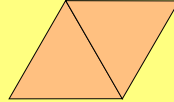
Picture Puzzles

Moniamond



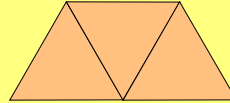
1 triangle

Diamond



2 triangles

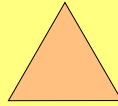
Triamond



3 triangles

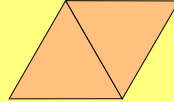
Picture Puzzles

Moniamond



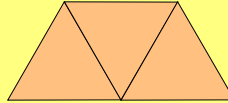
1 triangle

Diamond



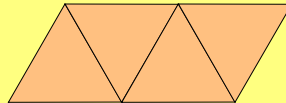
2 triangles

Triamond



3 triangles

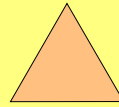
Tetramond



4 triangles

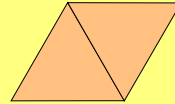
Picture Puzzles

Moniamond



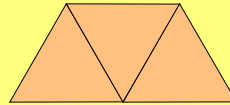
1 triangle

Diamond



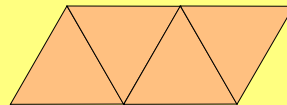
2 triangles

Triamond



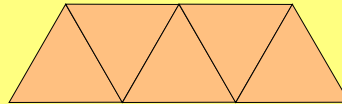
3 triangles

Tetramond



4 triangles

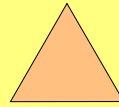
Pentiamond



5 triangles

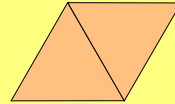
Picture Puzzles

Moniamond



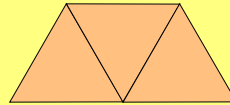
1 triangle

Diamond



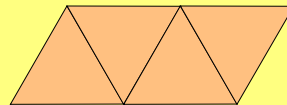
2 triangles

Triamond



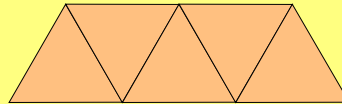
3 triangles

Tetramond



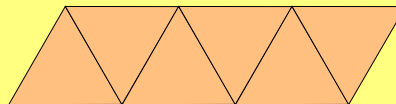
4 triangles

Pentiamond



5 triangles

Hexiamond

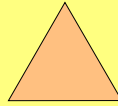


6 triangles

Picture Puzzles

Area

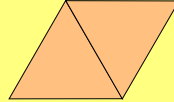
1 triangle



Perimeter

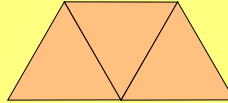
3 triangle sides

2 triangles



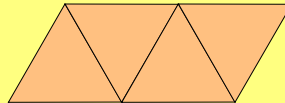
4 triangle sides

3 triangles



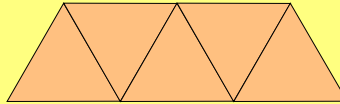
5 triangle sides

4 triangles



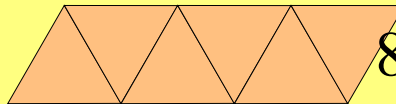
6 triangle sides

5 triangles



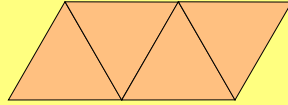
7 triangle sides

6 triangles



8 triangle sides

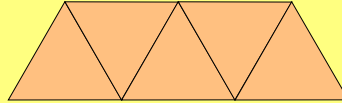
**There is only one way to make
a moniamond, a diamond or a triamond.
There are three ways to make a tetriamond.**



This is one way.

Make and draw the other two ways.

Record the area and perimeter for each one.



This is one way to make a pentiamond.

There are three more ways.

Make and draw them.

Record their area and perimeter.

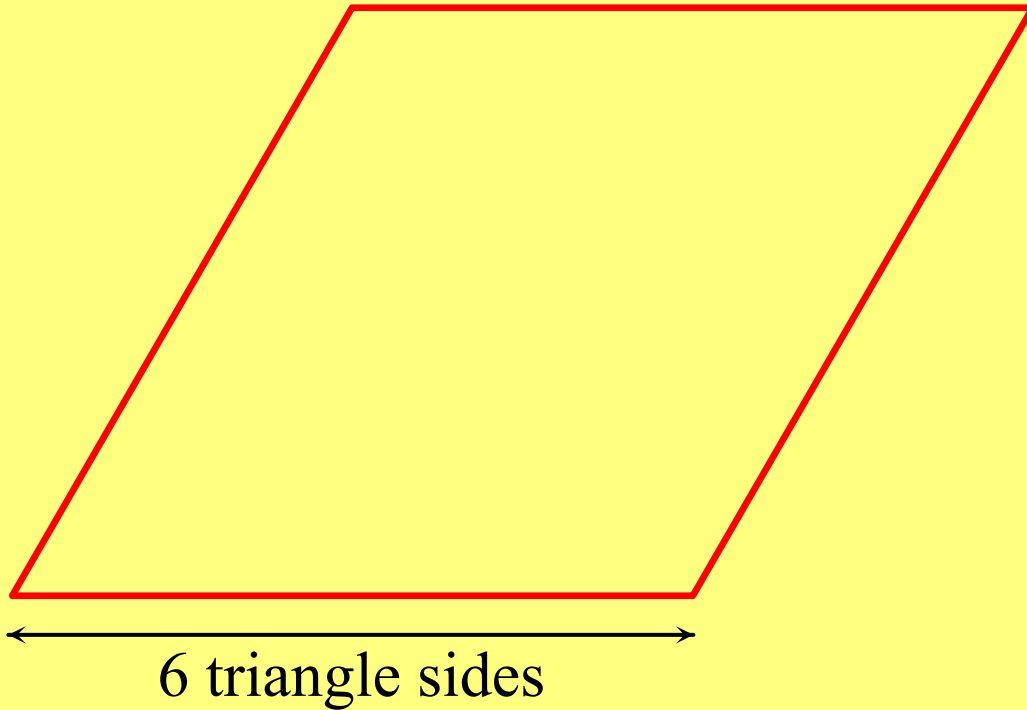
There are twelve ways to make a hexiamond.

One way has a perimeter of 6 triangle sides.

The other ways have a perimeter of 8 triangle sides.

Make, draw and cut out all the hexiamonds.

Make a 6 x 6 parallelogram using all the hexiamonds.

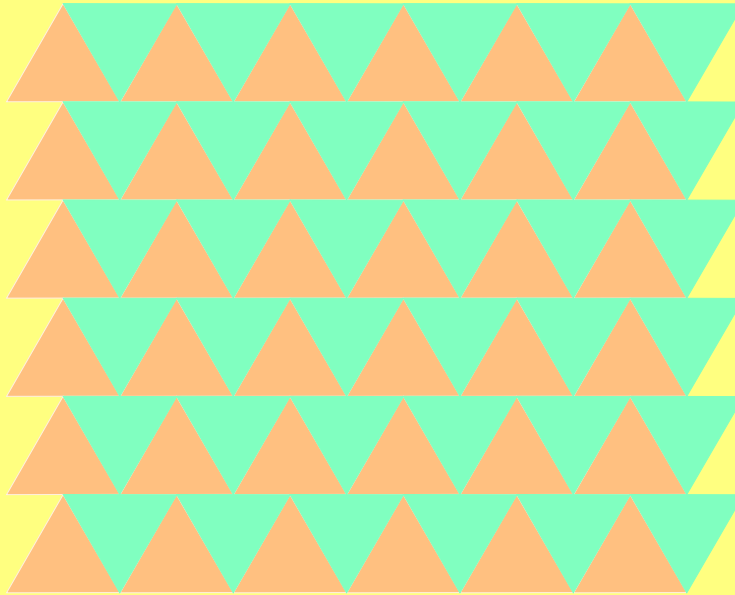


more

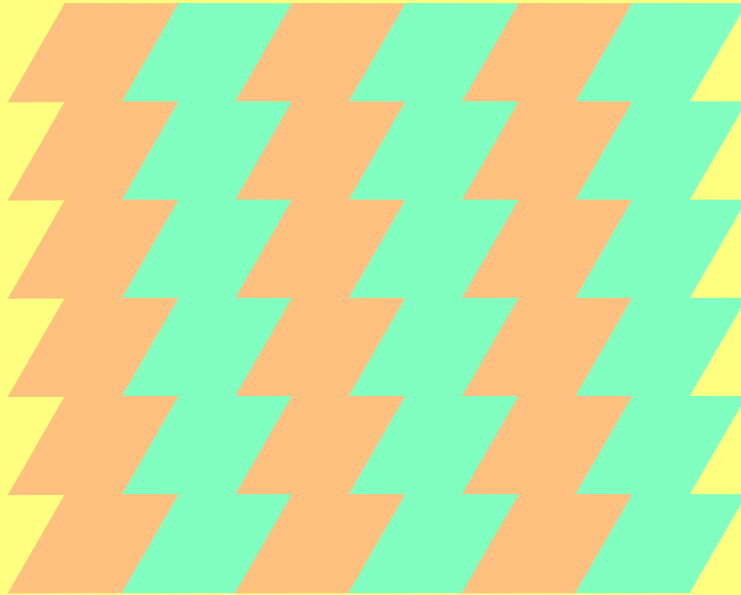
All polyiamonds

made from 6 or fewer triangles will tessellate.

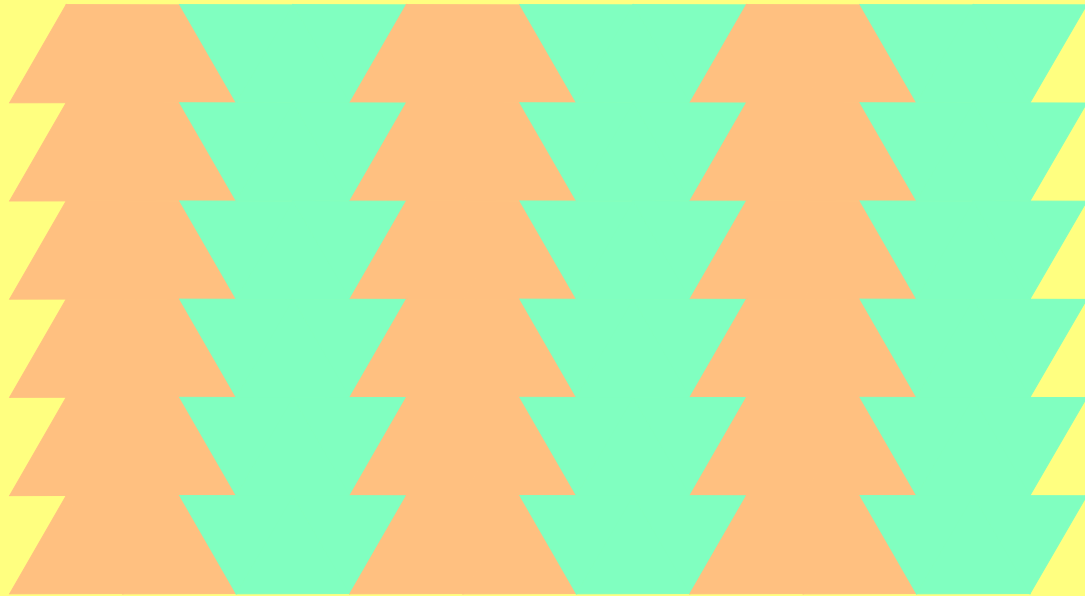
Moniamond tessellation



Diamond tessellation



Triamond tessellation



Choose any tetriamond, pentiamond or hexiamond.

Create your own tessellation pattern.

Sometimes there is more than one way.

THE END...

...OR IS IT?