



EPISODE 303

PORTALANDIA

Watch as agents Omar, Oswald, and Opal get stuck in the 17th Dimension, while agent Orla has to build a portal to get them back. Will she be able to save them?

CASE SUMMARY

CASE: Save agents Omar, Oswald and Orla from the 17th dimension.

OUTCOME: After several tries, Agent Orla was able to build a portal to save the agents from the 17th dimension. She had to use several shapes to create one larger shape without any gaps or holes.

COLD CASE EXTENSION ACTIVITY

Something VERY ODD has happened! Tessellations are falling apart and shapes are flying everywhere. To put the tessellations back together you must make your very own tessellation.

Grab a piece of paper and draw your own tessellation. Use different colours and different shapes to fill the entire page. Remember—a tessellation is an arrangement of shapes that closely fit together in a repeated pattern to create a larger shape without gaps or overlapping. When you're done show your family and see if they can point out all the shapes you used.



SYNOPSIS FOR TEACHERS/PARENTS:

In this episode, Omar, Oswald, and Opal get stuck in another dimension and Orla must build a portal to get them back. Orla uses her knowledge about different shapes to save the Squad.

This episode teaches children about shapes and tessellations—shapes that are repeated to fill a surface with no spaces or gaps in between. This episode also encourages children’s critical thinking and creativity, and introduces them to important geometry and spatial concepts.

CURRICULUM EXPECTATIONS:

Grade 1 Math: Patterning and Algebra

- › Identify, describe, and extend, through investigation, geometric repeating patterns involving one attribute.
- › Represent a given repeating pattern in a variety of ways.

Grade 2 Math: Geometry and Spatial Sense

- › Distinguish between the attributes of an object that are geometric properties and the attributes that are not geometric properties, using a variety of tools.
- › Identify and describe various polygons and sort and classify them by their geometric properties, using concrete materials and pictorial representations.

Grade 2 Math: Patterning and Algebra

- › Represent a given growing or shrinking pattern in a variety of ways.
- › Create growing or shrinking patterns.
- › Create a repeating pattern by combining two attributes.

Grade 3 Math: Geometry and Spatial Sense

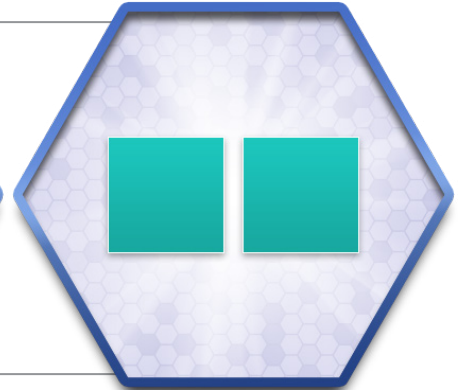
- › Identify and compare various polygons and sort them by their geometric properties.
- › Solve problems requiring the greatest or least number of two-dimensional shapes needed to compose a larger shape in a variety of ways.
- › Explain the relationships between different types of quadrilaterals.



THIS OR THAT!

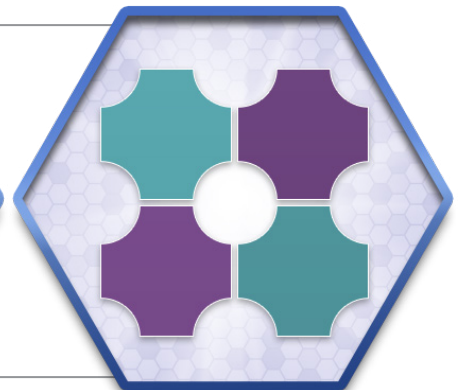
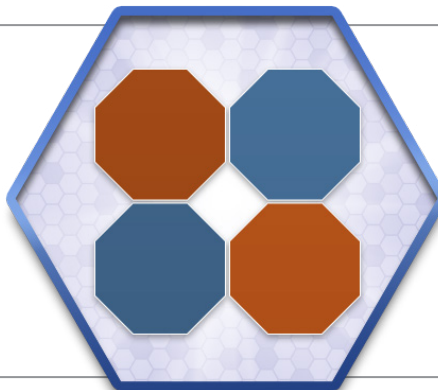
QUESTION #1

What two shapes, put together, create a rectangle?



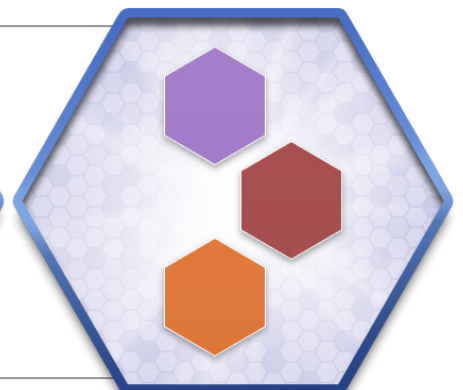
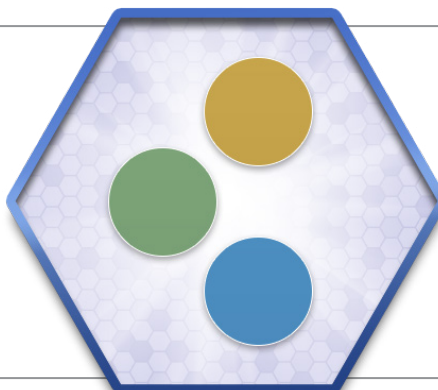
QUESTION #2

Which of the following needs two triangles to fill in the gap?



QUESTION #3

Triangles or squares can be placed together without creating gaps. What other shape can do this?

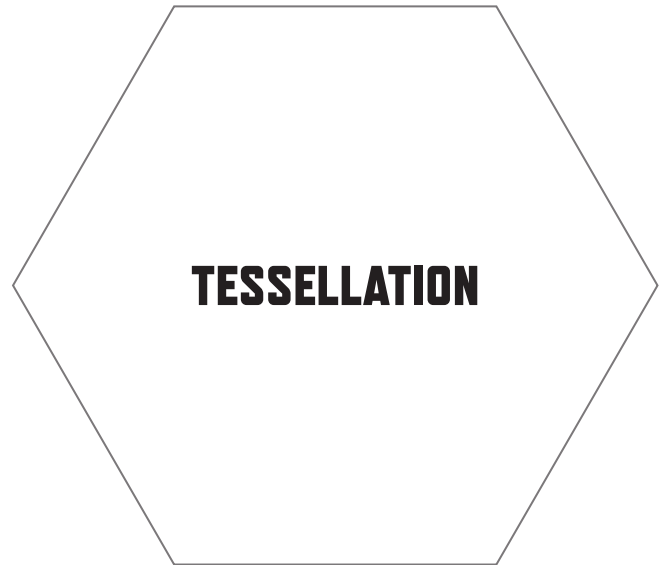
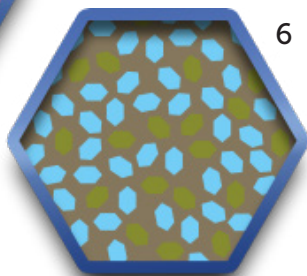
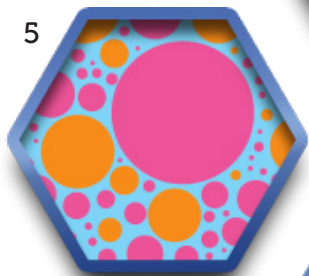
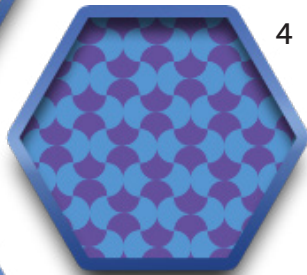
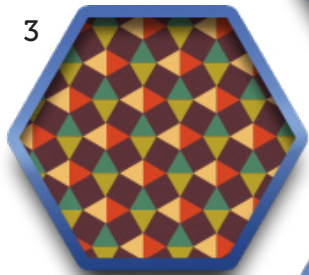
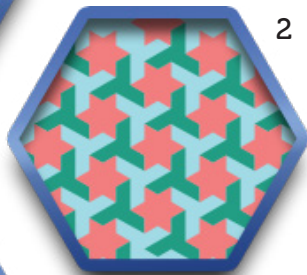
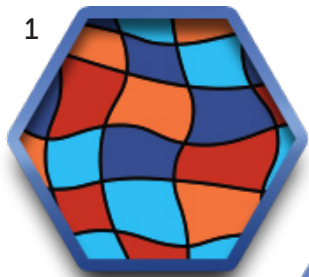


1. Image 1 (Octagon pattern). 2. Image 2 (Squares). 3. Image 2 (Hexagons).

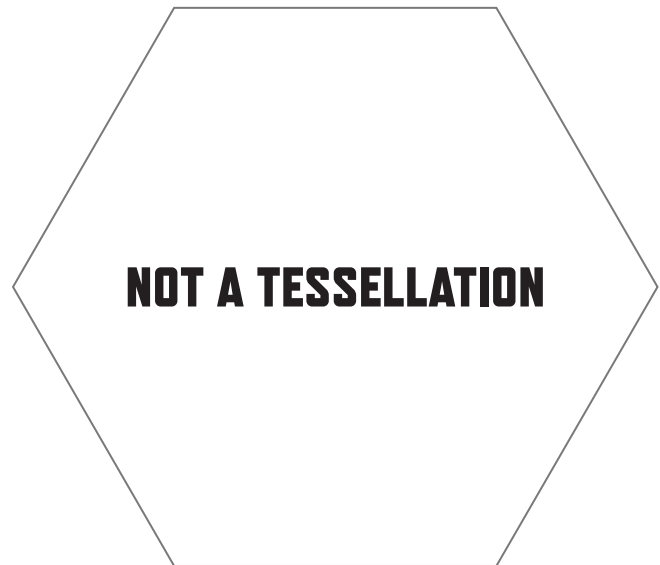


SORTING GAME

A tessellation is a pattern of shapes that form a larger shape without gaps or overlapping.
Sort the following into the right category.



TESSELLATION



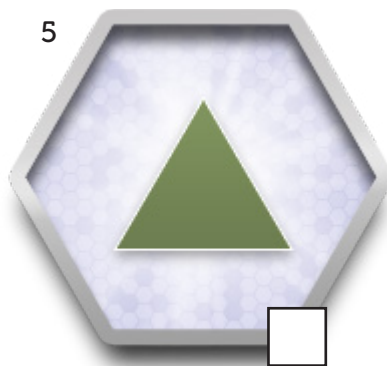
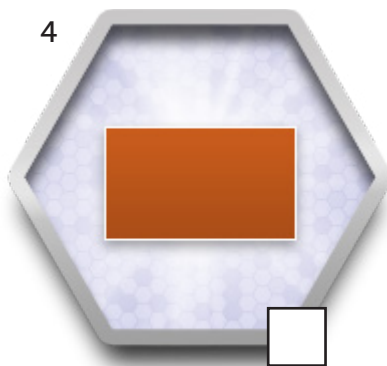
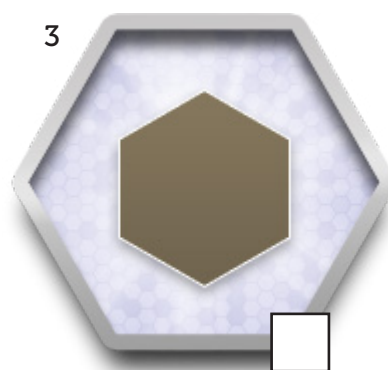
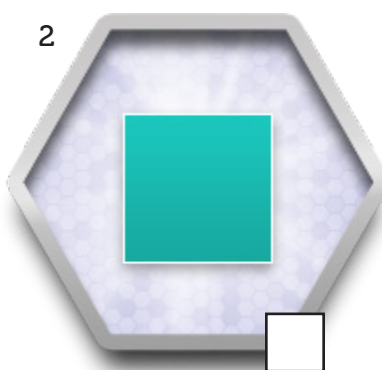
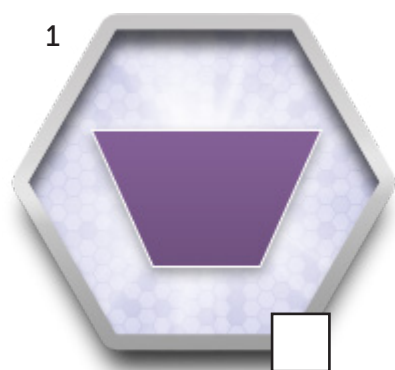
NOT A TESSELLATION

1. Not a Tessellation. 2. Tessellation. 3. Tessellation. 4. Tessellation. 5. Not a Tessellation. 6. Not a Tessellation.



CATEGORY SELECTION

Select all the shapes that have 4 sides.



1. Four sides. 2. Four sides. 3. Six sides. 4. Four sides. 5. Three sides.



SEARCH AND FIND

Can you find the following?



Flying sharks



Triangle



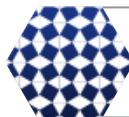
Giant butterfly



Rectangle



Giant plant



Tessellation



PUZZLE

Cut along the solid white lines to make a puzzle.

