



**Friday 10th July 2020**

**WALT compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes**

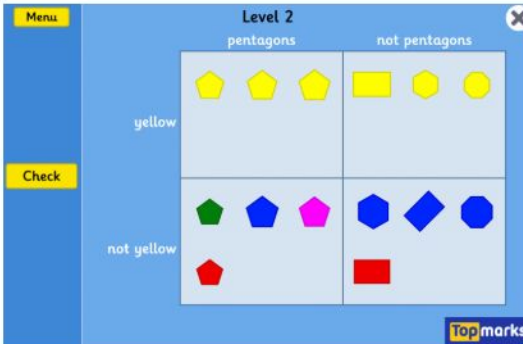
**First, play a shape sorting game on the Mathsframe website**

**Use the link:**<https://www.topmarks.co.uk/carroll-diagrams/2d-shapes>

 **2D Shapes Carroll Diagrams** 

This resource is designed to develop an understanding of the sorting of 2D shapes on a Carroll diagram using particular properties as criteria. Shapes are sorted by two varying criteria.

Each of the four levels of difficulty can help children to identify and know the names of 2D shapes of different colours, sizes and orientations. Levels 3 and 4 support the understanding of the properties of regular and irregular 2D shapes, and right angles.

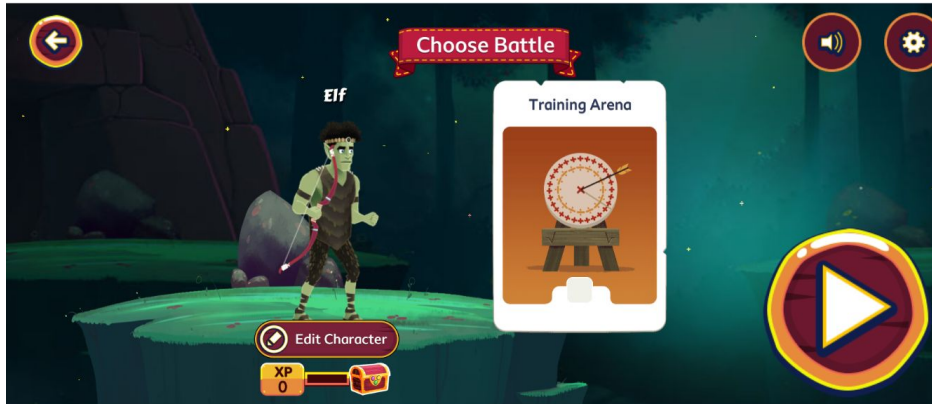


**Next, play the game below.**

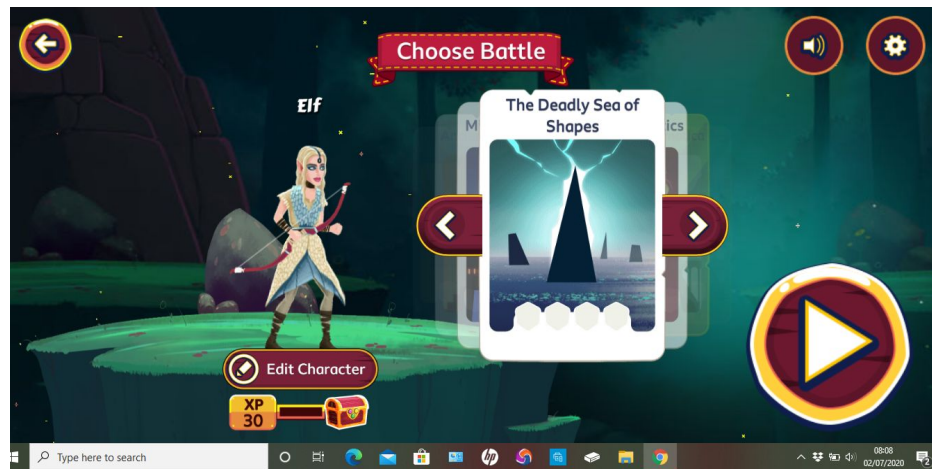
**What have you learnt about the properties of shape? This game will test your knowledge of shapes.**

<https://www.bbc.co.uk/games/embed/guardians-mathematica>





Complete your 'basic training' to be able to get to the next level.



When you have completed your training, you must press the arrow keys to choose the game that I want you to play today - [The Deadly Sea of Shapes](#).

Remember to read the questions carefully!

## **NRICH ACTIVITY - Torn Shapes**

See below

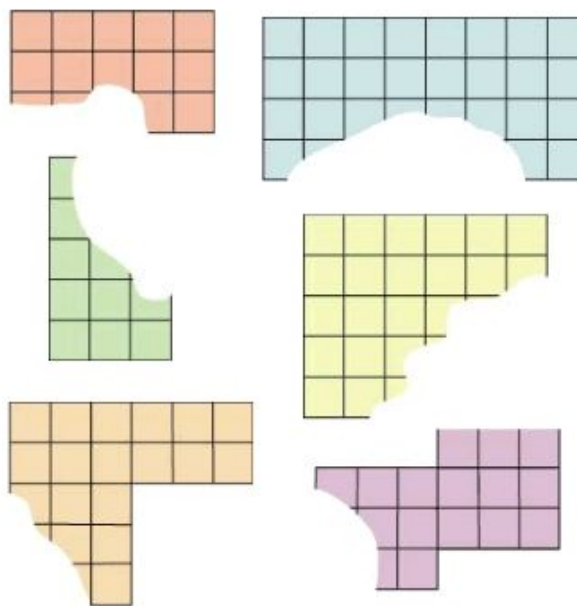
# Torn Shapes

Age 7 to 11 ★

Jason's class cut out rectangles and some shapes which were two rectangles joined together from one centimetre squared paper. They then counted how many squares the shapes took up.

After this they tore a piece out of some of their shapes to make a puzzle for the other groups to do.

Can you work out how many squares there were in these shapes before the bit was torn out? The orange, blue, green and yellow shapes were rectangles. The bottom two shapes, which are pale orange and purple, were each two rectangles joined together.



Courtney's group tore too much off their grey rectangle!



What is the smallest number of squares it could have had?  
What is the largest number of squares it could have had if it was not longer than the longest of the other shapes?

**SOLUTIONS SENT INTO NRICH**

Another well answered problem! Particularly clear solutions were sent in by James from St Mary's School, Sara-Louise from Perton Middle School and Rowena from Christ Church Infants. Sara-Louise said:

My method for this problem was to count the number of squares along one side, then times them by the number of squares along the other side. For the rectangles that were made up of two shapes, I first split the single shape into two, timesed the number of squares along the sides of the shapes (separately), then added them together.

Rowena had a slightly different way of finding out the number of squares taken up by each shape. She wrote:

I am going to count the whole squares up and across, then draw the outline of the rectangle, and then draw the squares on to it that weren't there before. I will count the squares and put the total into a table.

Here's Rowena's table:

Rectangle	Number of Squares
Orange	3 down x 5 across = 15
Blue	4 down x 8 across = 32
Green	5 down x 3 across = 15
Yellow	5 down by 6 across = 30
Pale orange	21
Purple	18

For the final shape, James said:

There were **3** in the column for the last puzzle and I could see a bit of a sixth square so the smallest number was  $3 \times 6 = 18$ . The longest shape had **8** in a row so the most it could have is  $3 \times 8 = 24$ .

**Did you get the answers right?**