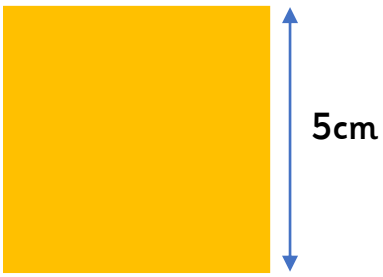
Your friend has invited you to play on a live stream computer game, you can split screen and compare activity.

The aim of the game is to gain points through creative use of shapes.

LEVEL ONE

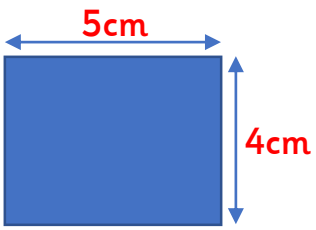
1. Your friend has created this square and gains 1 point per cm in the perimeter. What's the score to beat?

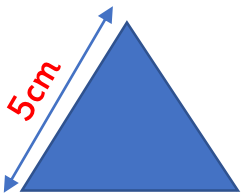


You are given a rectangle with one short side set at 3cm, how long will you need to make the long side to beat your friend's score?

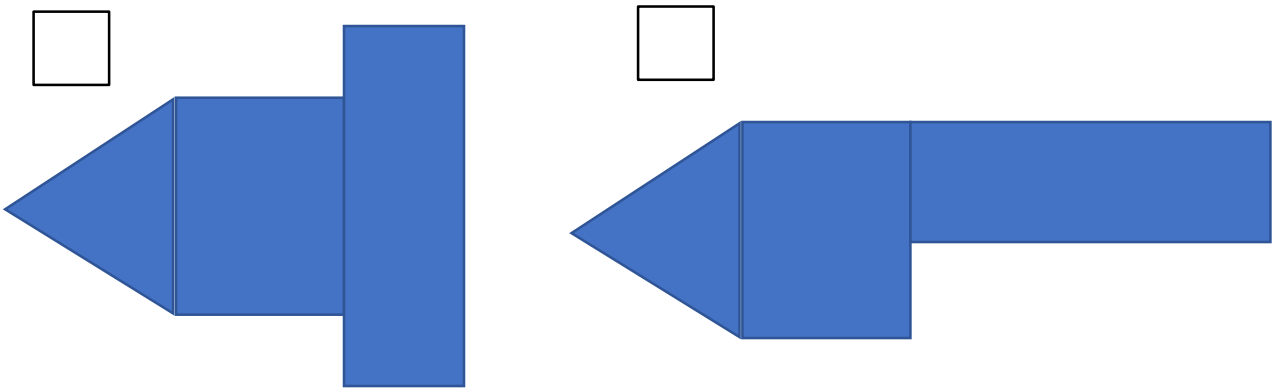
LEVEL TWO

Next is compound shapes, this is trickier you are both given the same shapes.

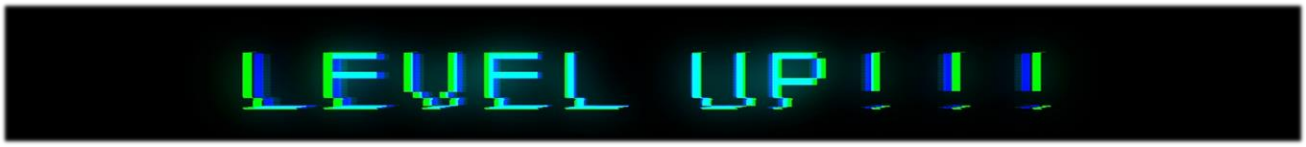




2. Which configuration will give you the largest perimeter and win you the most points, tick a box to show your choice.



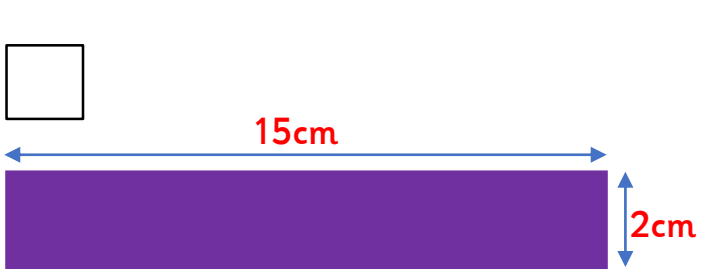
To level up use the measurements in red to calculate the length of perimeter of your chosen shape.

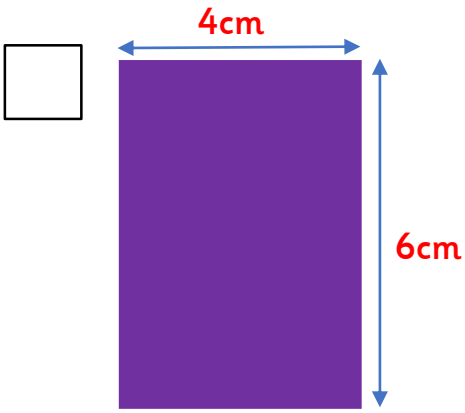


LEVEL THREE

You've reached the end game! The rules change and area is your next challenge.

3. Below is the split screen with you on the left. Tick who has won.

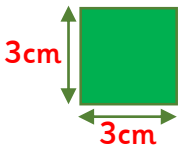


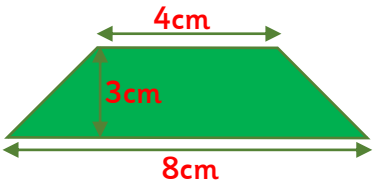


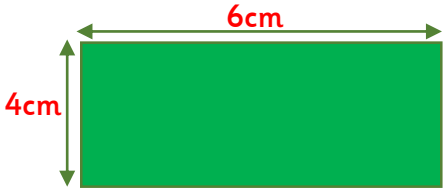
What was the winning score?

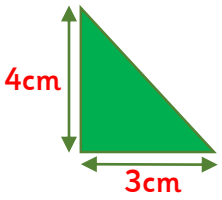
LEVEL FOUR

It's down to the final task, area of compound shapes!
You have been given the follow shapes:



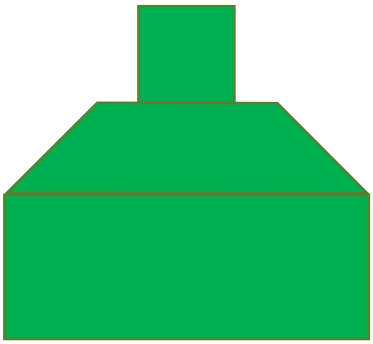




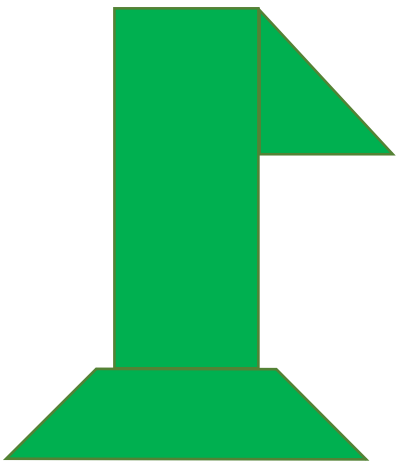


4. You can use a maximum of three shapes.
Which configuration below will give you the highest score?

Area of A =



Area of B =



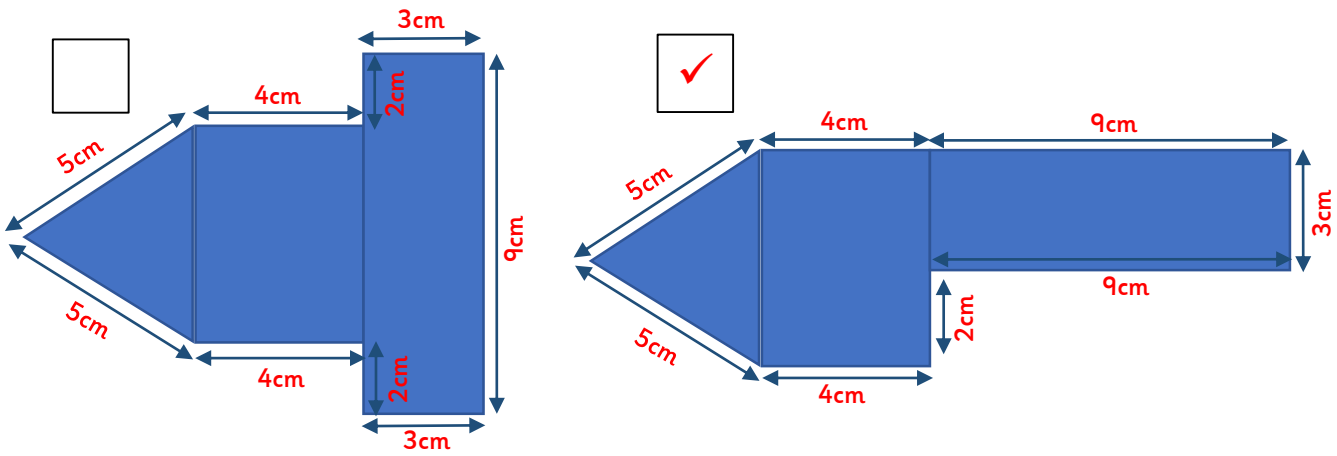
Area of C =

Highest Score =

You did it! Master of perimeter and area... who will YOU challenge next?

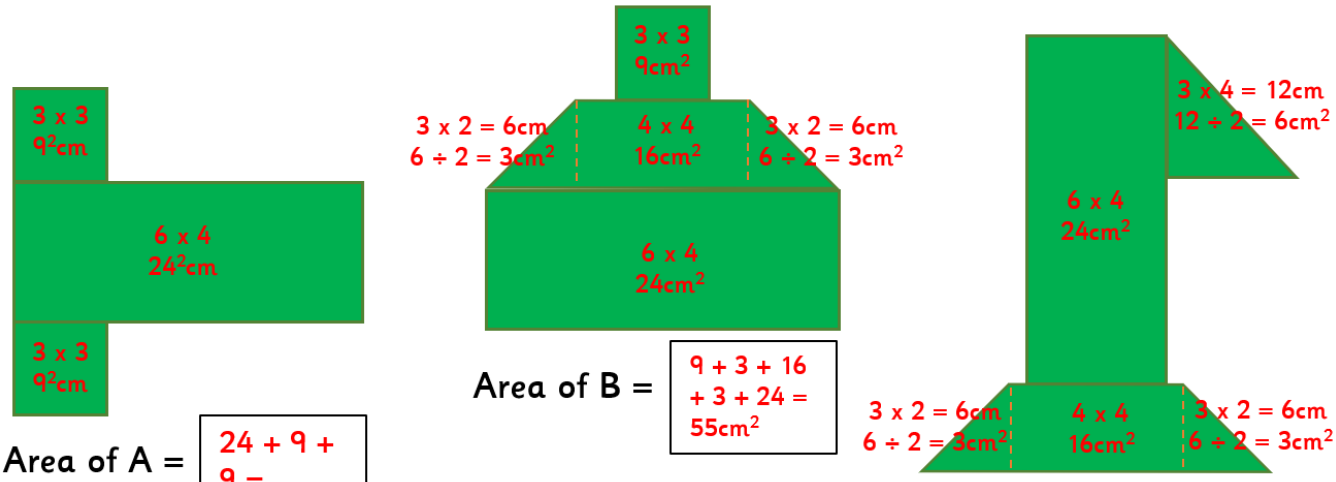
Reasoning and Problem Solving – Geometry Perimeter and Area

1. Need to beat 20 points (5cm + 5cm + 5cm + 5cm = 20cm)
   A rectangle with 2 sides of 3cm will need the other two lengths to be 7.5cm to get points of 21 (3cm + 3cm + 7.5cm + 7.5cm = 21cm)

2. 

The first shape's perimeter = 37cm. The second shape's perimeter = 41cm

3. The first shape is larger with an area of 30cm² (15 x 2). The second shape's area is 24cm² (4 x 6).

4. 

Area of A = 24 + 9 + 9 = 42cm²

Area of B = 9 + 3 + 16 + 3 + 24 = 55cm²

Area of C = 6 + 24 + 16 + 3 + 3 = 52cm²

Highest Score = Shape B will give you the highest score of 55cm²