

Baking with Numbers

Rainbow Cupcakes

Ingredients

Cake

- 150g unsalted butter
- 150g caster sugar
- 150g self-raising flour
- ½ tsp baking powder
- 3 large eggs
- 1 tsp vanilla extract

Decoration

- 3 tbsp raspberry jam
- 250g unsalted butter
- 500g icing sugar
- 1 tsp vanilla extract
- 2 tsp milk
- 6 food gel colourings

Equipment

- 12-hole cupcake tray
- 12 cupcake cases
- Stand mixer
- Bowl and spatula
- Piping bag
- Piping nozzle

Method

- Preheat oven to 180C/Fan oven 160C/Gas Mark 4. Arrange 12 paper cases in a cupcake or muffin tin.
- In a stand mixer, beat together the butter and sugar for a few minutes until light, pale and fluffy.
- To a separate bowl, sift in the flour and baking powder.
- To the creamed butter and sugar, add the eggs one at a time together with a spoonful of flour, beating well after each addition. Then add the remaining flour and vanilla extract and beat until smooth.
- Divide the mixture evenly between the paper cases then bake for 15-18 minutes, or until the cupcakes are well risen and golden brown. Lift out the cupcakes and leave to cool on a wire rack.
- Cut a small section out of the middle of the cupcakes then fill each with a little jam.
- For the buttercream, beat the butter, icing sugar and vanilla extract together until well blended and smooth. Use a little milk if to afford a perfect piping consistency.
- Distribute the buttercream between 6 small bowls and colour up using the different food colourings. Transfer each buttercream to a small piping bag, then pipe the 6 buttercreams side by side on a piece of cling film. Roll up the cling film and sit this in a larger piping bag fitted with a nozzle.
- Pipe the rainbow buttercream on top of the cupcakes. Decorate with sprinkles.

Share Your Bakes

Have fun giving this recipe a try at home and share your bakes with Josh on Instagram @joshpsmalley and using #NumberDay



Dr Josh Smalley

Great British Bake Off Finalist 2023
STEM communicator

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And now for some Number Activities...

Where do we use Numbers?

Numbers appear everywhere in our baking. We count and weigh out our ingredients, use different times for baking and cooling, use temperatures to set our ovens, plus measure lengths and angles when portioning up the bakes we have made. So numbers are really important and to get you thinking even more, here are a few questions to think about once you have made your muffins...

For Ages Under 7

- If 4 people were sharing these 12 muffins, how many would they each get to eat?
- How many muffins would we make if we trebled the recipe?
- If we halved the recipe how much milk and oil would we need?
- Weigh each of the muffins individually and find out which is the lightest and which is the heaviest.

For Ages 7-11

- If we were to treble the recipe, how much of each ingredient would we need?
- 1 tablespoon is equal to 15 g. How many grams of jam do we need for the recipe?
- 1 tablespoon (tbsp) is equal to 3 teaspoons. How many teaspoons of milk and jam do we need?
- The muffins take 15 minutes to bake. How many seconds are there in 15 minutes?
- Using the weights of all 12 muffins, can you work out the average weight of one of your muffins?

For Ages 11-16

- 1 cup of flour is equivalent to 120g and 1 ounce (oz) of flour is equivalent to 28.3g. Can you convert the 150g flour into both cups and ounces?
- Can you work out how much the ingredients cost in total to buy?
- If we doubled the recipe would it cost twice as much or not?
- Measure the diameter of one of the holes of your muffin tray. Can you work out its circumference and area?

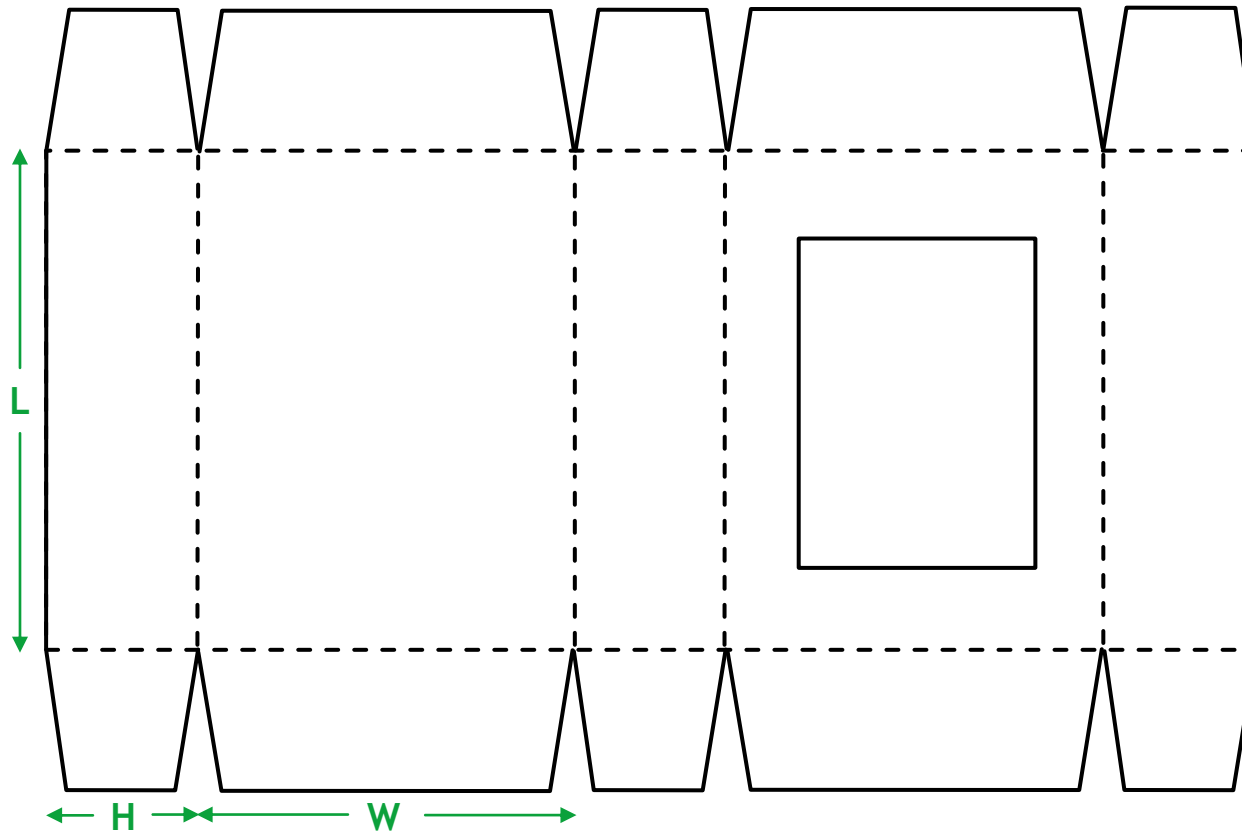


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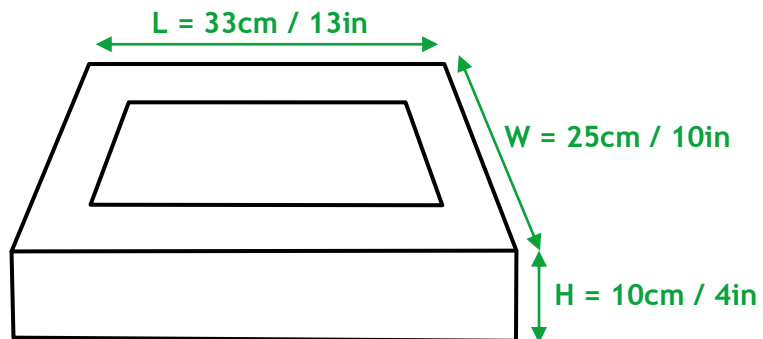
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Baking with Numbers

Building a Box for you Muffins



$L = 33\text{cm} / 13\text{in}$
 $W = 25\text{cm} / 10\text{in}$
 $H = 10\text{cm} / 4\text{in}$



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