



# Number Partners Challenge 2017 Volunteer Tip Sheet



## Round Three: Pumpkin Pies

This challenge looks at ratios, division and fractions! You should **spend no more than 30 minutes** on the challenge as a whole – try and get as far as you can, but incomplete entries can still be submitted. Make sure to show your working out!

You will need:

- Entry sheet
- Scrap paper and pens for your working out

All of the activities featured in the challenge this year are adapted from resources from nrich at the University of Cambridge - <http://nrich.maths.org>



### Pumpkin Pies

Saira wanted to make five pumpkin pies to sell at the charity fair, each pie would have 8 slices. Her mother, a professional baker, had a recipe for making 30 pies. She used:

- 5 dozen eggs
- 1.5 litres of condensed milk
- 330 tablespoons of sugar
- 90 cups of pumpkin

**How much of each ingredient does Saira need for 5 pies?**

Saira, sold  $\frac{1}{2}$  of the pie slices in the morning. In the afternoon, she sold  $\frac{3}{5}$  of the remaining slices. When the fair ended she gave  $\frac{1}{4}$  of what was left to her friend Anita and took the rest home.

**How many slices did Saira take home?**

For groups that are able, there is an extension question for bonus points:

**If Saira made £80 at the fair, how much did she charge for each slice?**

### Tips for volunteers

- Encourage pupils to think through the problem and understand how ratios and proportion come into play in each question
- Pupils should start by converting each unit into a number value to help with ratios
- Pupils who struggle with division should be guided to think about doubling and halving etc. to find the ratio of each ingredient needed
- When tackling the second question pupils can try drawing out the five pies and slices to visualise the fractions and solve the problem



Tweet us @NumberPartners your team's photos, comments and thoughts using #CountMeIn

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**How many slices did Saira take home?**

**Extension question** (if you have time)

**If Saira made £80 at the fair, how much did she charge for each slice?**



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## Team Entry Sheet: Round Three

<b>Team Name:</b>		
<b>School Name</b>	<b>Pupil Names</b>	<b>Volunteer Company</b>

<b>How much of each ingredient does Saira need?</b>	<b>Eggs</b>	
	<b>Milk</b>	
	<b>Sugar</b>	
	<b>Pumpkin</b>	<b>/4</b>
<b>How many slices of pie did Saira take home?</b>		<b>/4</b>
<b>How much did Saira charge for each slice of pie?</b>		<b>/4</b>

<b>Total</b>	<b>/12</b>
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### Submit your entry to:

Anita Kessie, Curriculum Project Coordinator

Email: [Anita.Kessie@thebp.co.uk](mailto:Anita.Kessie@thebp.co.uk)

Fax: 020 7375 2323

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Deadline for all entries is **Friday, 31 March 2017**