

Cooking Ratios



*Cooking is all about math —
trying to get proportions just right.*

You have 10 units of SPICE, 9 units of BUTTER and 9 units of FLOUR. You want to make three recipes — cake, pie, and muffins — each of which require whole-number amounts of flour, spice and butter. Unfortunately, you've lost the recipe book! However, you remember the following things:

- In total the recipes will use up all of the ingredients.
- Each recipe uses a unique amount of each ingredient.
- For each ingredient, a unique amount is used across the three recipes.
- For the cake, the units of flour plus the units of spice equals the units of butter.
- For the muffin, the units of butter plus the units of spice equals the units of flour.
- Only the cake uses more units of butter than spice.
- The cake's units of spice plus the muffin's units of spice equals the pie's units of spice.
- The cake uses the least amount of flour and the least amount of spice.
- The muffin uses four more units of flour than the cake.

	<u>Cake</u>	<u>Pie</u>	<u>Muffin</u>
<u>SPICE</u>	___ (1)	___ (2)	___ (4)
<u>BUTTER</u>	___ (3)	___ (5)	___ (8)
<u>FLOUR</u>	___ (6)	___ (7)	___ (9)

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 (1) (2) (3) (4) (5) (6) (7) (8) (9)