



Autumn apple cake v2

Functional Maths



Name _____ Date _____

To complete these tasks you will be using the recipe from Judith White's 2008 "Autumn apple cake" resource (page 1) available on [skillsworkshop](http://skillsworkshop.org).
The ingredients for one cake are listed below.

75 grams margarine	2 large eggs, beaten
150 grams soft brown sugar	a little milk
100 grams plain white flour	2 level teaspoons baking powder
150 grams wholemeal flour	1 tablespoon chopped mixed peel
½ teaspoon mixed spice	grated rind of 1 orange
½ teaspoon ground cinnamon	3 cooking apples

The following approximate conversions may be useful.

1 ounce = 25 grams 1 teaspoon = 5 grams 1 tablespoon = 3 teaspoons

Task 1

Use the internet, or visit a supermarket, to find the cost of buying **all** the ingredients.

Write your price list here.



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Task 2

Round all the prices to the nearest 10p.

Use the rounded prices to **estimate the total cost of buying all the ingredients.** _____

Show your working out here.

Task 3

Work out the actual cost of making one cake. _____

Show your working out here. Use an extra sheet if needed.



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Task 4

You cut the cake into 12 slices. **How much does each slice cost?** _____

Show your working out here.

Show how you checked your answer.

Task 5

You need to refer to the full recipe in Judith White's resource to complete this task.

You make 5 cakes for a charity coffee morning. You have two 20 cm cake tins.

You can cook two cakes at once in your oven.

Estimate the total time to cook 5 cakes. _____

Show your working out here.



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Task 6

At the charity event, you sell each slice of cake for 50p more than it cost you to make.

How much profit did you make? _____

Autumn apple cake v2 Functional Maths mapping

This resource also covers many adult numeracy curriculum <http://www.excellencegateway.org.uk/sflcurriculum> elements. For related resources and further curriculum links please visit the download page for this resource [skillsworkshop](http://www.skillsworkshop.org)

FUNCTIONAL MATHEMATICS Coverage and Range statements (indicative only)

This resource is ideal for underpinning many Functional Maths coverage and range statements at Level 1 and Level 2 (see ticked areas of the table below). Coverage and range statements provide an indication of the type of mathematical content candidates are expected to apply in functional contexts. Relevant content can also be drawn from equivalent National Curriculum levels & Adult Numeracy standards. **However, in Functional Maths exams it is the process skills that are assessed; these are key to successful Functional Maths teaching and learning and must always be developed and stressed during teaching (see below).** Ofqual (2009), *Functional Skills criteria for Mathematics: Entry 1, Entry 2, Entry 3, level 1 and level 2.* <http://www.ofqual.gov.uk/>

Level 2

<ul style="list-style-type: none"> a) understand and use positive and negative numbers of any size in practical contexts b) carry out calculations with numbers of any size in practical contexts, to a given number of decimal places ✓ c) understand, use and calculate ratio and proportion, including problems involving scale d) understand and use equivalences between fractions, decimals and percentages e) understand and use simple formulae and equations involving one or two operations f) recognise and use 2D representations of 3D objects 	<ul style="list-style-type: none"> g) find area, perimeter and volume of common shapes h) use, convert and calculate using metric and, where appropriate, imperial measures ✓ i) collect and represent discrete and continuous data, using information and communication technology (ICT) where appropriate j) use and interpret statistical measures, tables and diagrams, for discrete and continuous data, using ICT where appropriate. k) use statistical methods to investigate situations l) use probability to assess the likelihood of an outcome
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Level 1

<ul style="list-style-type: none"> a) understand and use whole numbers and understand negative numbers in practical contexts ✓ b) add, subtract, multiply and divide whole numbers using a range of strategies ✓ c) understand and use equivalences between common fractions, decimals and percentages ✓ d) add and subtract decimals up to two decimal places ✓ e) solve simple problems involving ratio, where one number is a multiple of the other ✓ f) use simple formulae expressed in words for one or two-step operations g) use data to assess the likelihood of an outcome 	<ul style="list-style-type: none"> h) solve problems requiring calculation, with common measures, including money, time, length, weight, capacity & temperature ✓ i) convert units of measure in the same system j) work out areas and perimeters in practical situations k) construct geometric diagrams, models and shapes l) extract and interpret information from tables, diagrams, charts and graphs m) collect and record discrete data and organise and represent information in different ways n) find mean and range
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Process Skills (all levels)

Representing – selecting the mathematics and information to model a situation	Analysing – processing and using mathematics	Interpreting – interpreting and communicating the results of the analysis
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Skill Standards (Level 2)

<ul style="list-style-type: none"> • understand routine and non-routine problems in familiar and unfamiliar contexts and situations ✓ • identify the situation or problems and identify the mathematical methods needed to solve them ✓ • choose from a range of mathematics to find solutions ✓ 	<ul style="list-style-type: none"> • apply a range of mathematics to find solutions ✓ • use appropriate checking procedures and evaluate their effectiveness at each stage 	<ul style="list-style-type: none"> • interpret and communicate solutions to multistage practical problems in familiar and unfamiliar contexts and situations ✓ • draw conclusions and provide mathematical justifications
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Skill Standards (Level 1)

<ul style="list-style-type: none"> • understand practical problems in familiar and unfamiliar contexts and situations, some of which are non-routine ✓ • identify and obtain necessary information to tackle the problem ✓ • select mathematics in an organised way to find solutions ✓ 	<ul style="list-style-type: none"> • apply mathematics in an organised way to find solutions to straightforward practical problems for different purposes ✓ • use appropriate checking procedures at each stage ✓ 	<ul style="list-style-type: none"> • interpret and communicate solutions to practical problems, drawing simple conclusions and giving explanations ✓
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Tips

- Calculators can be used at all levels of Functional Maths but students must show their working out.
- It should be stressed that relatively few points are gained simply for getting the correct answer.
- Emphasis should be on showing clear working out and explanations, justifying methods and conclusions. Marks should also be awarded for clear evidence of checking work (e.g. reverse calculations, estimating a sensible answer first by using rounding, etc.).
- Encourage clear logical layout and provide extra paper if needed. For example, using a table to list prices.
- Point out that in Functional Maths there are often no definite “correct” answers.

For example:

The time needed for baking 5 cakes is approx. 1hr per batch of 2 cakes, plus 10 minutes needed for cooling before tins can be re-used, etc. Accept any sensible answers if they are justified (for example students might add on some time for lining and preparing the tins, pouring in the mix, etc.

The amount of milk is not defined exactly. Learners will have to use common sense. The cost of milk will also vary depending on what size carton of milk is bought, etc.