Making Biscuits Spreadsheet

1. What is in Cell B6?
2. What is the most expensive extra ingredient?
3. What is the cheapest extra ingredient?
4. How much will it cost to make 1 batch of biscuits with no extra ingredients? Use the formula =C7+C8+C9+C10+C11+C12 to work it out. Which cell do you need to put this formula in? Now enter a formula into D13 to calculate the total cost of 2 batches of biscuits. How will you change the formula?
5. How much will it cost to make 1 batch of biscuits with choc chips?
6. How much will it cost to make Ginger biscuits and Almond biscuits at the same time?
7. If you drop an egg and have to replace it, how will this affect the cost of a batch? (You will need to double the cost of the egg in Cell C10 to find out)
8. The formula in Cell D7 works out the cost of 2 lots of flour, like this: Cost per item X 2. The cost per item is in Cell C7, so the formula is =C7*2. What will you need to enter in Cell E7 to work out the cost of 3 lots of flour?
9. Copy the formula into E8, E9, E10, E11 and E12.
10. Use SUM to calculate the total cost in Cell E13. How is this different to working out the total in Question 4?
11. Work out the total cost of 3 batches of biscuits, using whatever extra ingredients you wish. You will need to enter a formula into Cell E23. You don't need to add everything up. Just enter a formula that adds Cost per batch to Cost of extras. Cost per batch is in Cell E13. Cost of extras is in Cell E21.
12. Look at the costs for making 5 batches of biscuits. Does this seem right to you? Check the formula. Change it if you need to. Check your results.

Making Biscuits Spreadsheet Extension Activities

1. The number of biscuits per batch can be altered by rolling out the dough more thinly (more biscuits) or more thickly (fewer biscuits). Change the numbers of biscuits in Cell C25 and discuss how this affects the profit per biscuit. Discuss the advantages and disadvantages of making your biscuits thicker or thinner. (Customer satisfaction, time to cook, texture …)
2. Decide on a fair price for your biscuits. Change the amount in Cell C26. How much profit do you make per biscuit now?
3. Try changing the values in Cells C25, C27 and C29. See how the other values change automatically. Experiment with the values to ask questions such as:
    - How much do I need to charge per biscuit to cover my costs?
    - How many biscuits do I need to sell from a batch to "break even"?
    - How much per biscuit can I afford to donate to charity without giving all of my profit away?
    - If the price of sugar goes up, what effect will this have on my profit? Will I need to charge more? Can I keep my price the same without making a loss?
    - What will be the effect of a "Buy one, get one free" offer?
    - Think of some questions of your own!

Making Biscuits Spreadsheet Helpsheet

= all formulae begin with =

***** multiplies (X) the contents of one cell by that of another (or by a specified value)
=A1*A2 multiplies whatever is in cell A1 by whatever is in cell A2
=A1*10 multiplies whatever is in cell A1 by 10
=C7+C8+C9+C10+C11+C12 adds all these values together
=SUM(C7:C12) is a shorter way of doing C7+C8+C9+C10+C11+C12

/ divides (÷) the contents of one cell by that of another (or by a specified value)
=A1/A2 divides whatever is in cell A1 by whatever is in cell A2
=A1/10 divides whatever is in cell A1 by 10

+ adds the contents of one cell by that of another (or adds a specified value)
=A1+A2 adds whatever is in cell A1 to whatever is in cell A2
=A1+10 adds 10 to whatever is in cell A1

- subtracts the contents of one cell from that of another (or subtracts a specified value)
=A1-A2 subtracts whatever is in cell A2 from whatever is in cell A1
=A1-10 subtracts 10 from whatever is in cell A1