



Activity description

In this activity students check and complete invoices. Students also enter their own data into spreadsheet simulations of three invoices. They then check and explain the figures generated. Two of the spreadsheets have mistakes built into the formulae. Students use checking techniques to spot and correct them.

Mathematical content: addition, subtraction, multiplication, conversion between pence and pounds, simple percentages for discounts and VAT.

Suitability

Level 1 (Foundation)

Time

2–3 hours

Resources

Student sheets, spreadsheet

Optional: slideshow

Equipment

Computers, calculators

Optional: internet access in order to research current tariffs

Key mathematical language

Estimate, invoice, VAT, percentage, discount

Notes on the activity

The slideshow can be used to introduce invoices and aid whole-class discussion. It includes examples to check and complete. You could remove some of the figures given in the final columns if you wish. The student sheets also give information about invoices and include the same examples.

(Figures for electricity prices are from March 2011.)

On the spreadsheet, students enter their own made-up figures into the blue cells. The rest of each sheet is protected – the password is fsma.

Unless you decide to unlock protected cells, students will have to redo the calculations on a printout of the worksheet.

Students may not necessarily do all three invoices.

During the activity

You could work through most of the examples on the slideshow and student sheets with the learners. Check that everyone knows how to calculate percentages; ask how many different ways they know.

Students then complete the spreadsheets.

- 1 They enter their own made-up data in the blue cells.
- 2 They print out a paper version of the completed spreadsheet.
- 3 They check for mistakes.
- 4 They correct the figures from a mistake onward using the lower portion of the printout.
- 5 At each point they should write a brief explanation of the calculation, for example VAT is $20 \times \text{£}12.83 / 100 = \text{£}2.57$.

Points for discussion

Discuss the use of pounds and pence on the electricity bill and how to convert from pence to pounds.

Ask how students would work out 5 % and 20 % and discuss a variety of methods. Make sure that students know what to do with discounts and VAT.

Discuss any problems that arise when students are working with calculators and spreadsheets.

Extensions

Students could bring in invoices from home for comparison.

Some students may wish to research mobile phone or utility tariffs on the internet.

Answers

INVOICE			J & C CATERERS Ltd 27 MARKET ST DOWNTON
Description	Quantity	Unit cost	Gross
Sandwiches	72	0.80	57.60
Vol-au-vents	60	0.47	28.20
Bowls of salad	6	2.55	15.30
French loaves	6	0.70	4.20
			105.30
5 % discount			5.27
			100.03
Terms: Monthly	VAT @ 20 %		20.01
TOTAL			120.04