



Activity description

Students check for errors in a simulated invoice, phone bill and bank statement (several errors on each). Copies of the invoice, phone bill and bank statement with gaps for students to fill with the correct amounts are also provided.

Suitability and time

Level 1 (Foundation)

2–3 hours

Resources and equipment

Student information sheet, simulated invoice, phone bill and bank balance (with and without errors)

Optional: slideshow

Calculators

Note: if you are thinking of saving paper by double-sided photocopying, make sure you do not put different versions of the same item on the same sheet as this could be very confusing.

Key mathematical language

Add, subtract, multiply, percentage, VAT, banking terms (as given in student information), checking, estimating, reverse calculations.

Notes on the activity

This activity is about checking invoices, bills and bank statements.

A simulated example of each is included, but you may wish to study just one at a time or split the activity into two parts, leaving the bank statement until a later session.

If possible also show learners some real examples of invoices, bills and bank statements, and discuss any differences with the simulated versions used in this activity. For example, the phone bill included in this activity is a simplified version of an actual bill – the actual bill gave much more information about the breakdown of calls, but no information about the charge rates on the bill itself. Real charge rates for phone calls can be found on the internet.

During the activity

Slides 3, 4 and 5 of the slideshow include an invoice, phone bill and bank statement, similar to (but not the same as) those students will check. These can be used to introduce the activity and ensure that students know the meanings of the terms they will meet.

There are gaps in the slides so you can work through them as a whole class activity, to ensure that students have met the types of calculations they will need to do. You could print copies of these slides for students to use during this part of the activity.

The student sheets include an information sheet as well as a simulated invoice, bill and bank statement that include errors for students to find. It is expected that learners will be allowed to use a calculator for this work.

Copies of the invoice, bill and bank statement with gaps for students to complete correctly are also included. These can be used as an alternative activity or as a follow-up activity after students have found the errors.

Points for discussion

Address misconceptions that occur when students calculate with money. For example, check they understand that 3.2 means £3.20 and not £3.02.

Also check that students know how to work out 20% for the VAT.

Explain the meaning of the abbreviations used on the bank statement, and which items to add and which to subtract from the balance.

At the end of the activity discuss what misunderstandings the errors highlight, and how the bank balance has an in-built check.

Extensions

Students could be encouraged to use a variety of methods to check the calculations and find the errors.

Students could also bring in their own bills or bank statements from home and check them, but be careful when dealing with such personal information.

Answers

Errors are as follows.

Invoice

Prune 4 conifers – VAT is £9.60 not £9.06 (pence written incorrectly)

Prune 2 apple trees – Net Amount is £31.50 not £31.05 (pence written incorrectly), so VAT should be £6.30

Disposal of Debris – VAT is £4.80 not £4.08 (pence written incorrectly)

Total Net Amount based on figures in invoice is £267.85 not £257.85 (carry omitted)

Total VAT based on figures in invoice is £52.31 not £43.25 (the £9.06 has been omitted)

Phone Bill

UK Calls Daytime – Total cost should be £3.45 not £4.75 (1 hour 46 minutes taken as 146 minutes)

To a mobile Daytime – Total cost is £13.88 not £4.00 (Number of calls used instead of times)

To a mobile Evening/Weekend – Total cost is £11.70 not £11.07 (pence written incorrectly)

Cost of calls based on figures in table is £26.64 not £26.44 (wrong digit repeated)

VAT should be £11.89 not £20.00 (not calculated as a %)

Total based on figures in list should be £83.93 not £143.36 (calls and line rental double counted)

Bank Statement

24th September Balance 878.73 should be 878.83 (carry omitted)

29th September Balance 590.65 should be 490.65 (50 added instead of subtracted)

5th October Balance 542.02 should be 542.20 (pence written incorrectly)

13th October Balance 469.82 should be 444.22 (47.80 was added and 35.00 subtracted)

Total Payments in 1281.46 should be 1156.14

Different versions of the three documents are given on pages 4 to 6 of the student sheets – these have gaps for learners to complete. These versions can be used to find the correct figures after learners have spotted the errors or they can be used as a separate exercise.

The corrected versions are given on pages 4-6 below. These can be used to check learners' work or for classroom discussion.

The completed versions for the slideshow are given on pages 7–9 below.

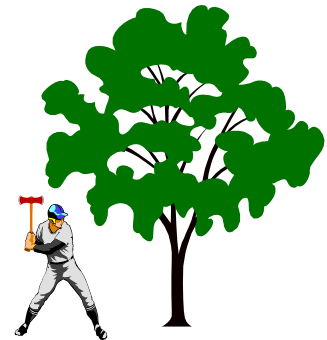
Worksheet answers Corrected invoice

Tree Care Limited



Fir Tree Road
Oakhampton
OK7 3AX

01876 34259



Mr Green
Poplar Drive
Oakhampton
OK6 2AX
20 February

Customer Reference
25489

Job Number 654

Invoice No: 22584

Work Done	Net Amount	VAT @ 20%
Trim all hedges	£164.80	£32.96
Prune 4 conifers @ £12 each	£48.00	£9.60
Prune 2 apple trees @ £15.75 each	£31.50	£6.30
Disposal of debris	£24.00	£4.80
Total	£268.30	£53.66
	Total to pay	£321.96

Worksheet answers Corrected phone bill

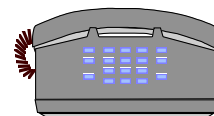
Your account number
ST 4259 1273

Bill number
Q053 ZY

Date
11 November

MR B QUIET
54 RINGMORE ROAD
CHATHAM
SB24 3HP

ALL TALK



Bill for 01457 984375

Total now due

Please pay by 22 November

Bill Totals

This is a summary of your bill.
Note that VAT is payable on the Line Rental and Cost of Calls, but not on the Payment Charge.

Cost of Calls	£35.85
Line Rental	£32.99
Total	£68.84
VAT @20%	£13.77
Payment Charges	£4.50
TOTAL NOW DUE	£87.11

Cost of Calls A summary of your calls and the associated costs are given below:

Type of call		Number of calls	Total duration (hours:minutes)	Charges	Total cost
UK calls	Daytime	48	01:46	3.25p per minute	£3.45
	Evening/Weekend	124	09:13	5.50p per call	£6.82
To a mobile	Daytime	32	01:51	12.50p per minute	£13.88
	Evening/Weekend	72	02:36	7.50p per minute	£11.70

Worksheet answers Corrected bank statement

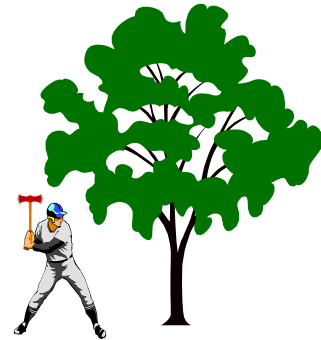
I M Rich Esq Pound Lane Miserton LS9 3TW	Account Summary			
	Opening balance		£368.92	
	Total payments in		£1156.14	
	Total payments out		£1180.31	
	Closing balance		£344.75	
14 September to 13 October	International Bank Account Number GB09MIDL4043212345678			
	Branch Identifier Code MIDLGB2114V			
Account Name Mr I M Rich	Sort Code	Account Number	Sheet Number	
	40-43-21	2345678	236	
Your Bank Account details				
Date	Payment type & details	Paid out	Paid in	Balance
13 Sep	BALANCE BROUGHT FORWARD			368.92
14 Sep	ATM CASH SEP14 DOWNTOWN 1 @09:50	50.00		318.92
20 Sep	CHQ 104569	125.98		192.94
22 Sep	ATM CASH SEP14 PENNY LANE @18:25	60.00		132.94
24 Sep	CR PAYMEBACS		745.89	878.83
27 Sep	DC COSTAPACKET	329.43		549.40
28 Sep	CHQ 104570	8.65		540.75
29 Sep	ATM CASH SEP23 DOWNTOWN 2 @10:07	50.00		490.75
1 Oct	DD STROUD DC	166.00		
	SO KEEPSON I	200.00		124.75
2 Oct	CHQ 104571	17.50		107.25
5 Oct	CR PAID IN AT HSBC BANK PLC		375.00	
	DC SHOPALOT	39.95		442.30
6 Oct	ATM CASH OCT02 DOWNTOWN 2 @10:03	60.00		382.30
8 Oct	DD CHARITY PAYMENT	25.00		357.30
10 Oct	CHQ 104572	47.80		
	CR PAID IN AT BANK		35.00	344.50
13 Oct	CR NET INTEREST TO 12OCT		0.25	344.75
13 Oct	BALANCE CARRIED FORWARD			344.75

Tree Care Limited



Fir Tree Road
Oakhampton
OK7 3AX

01876 34259



Customer Reference
25489

Job Number 654

Mr Green
Poplar Drive
Oakhampton
OK6 2AX

20 February

Invoice No: 22584

Work Done	Net Amount	VAT @ 20%
Trim all hedges	£200	£40
Prune 4 conifers @ £15 each	£60	£12
Prune 3 apple trees @ £16.50 each	£49.50	£9.90
Disposal of debris	£28.50	£5.70
Total	£338	£67.60
	Total to pay	£405.60

TERMS: PAYMENT WITHIN 10 DAYS

Slideshow answers Completed phone bill

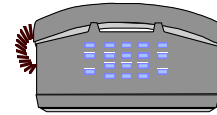
Your account number
ST 4259 1273

Bill number
Q053 ZY

Date
11 November

MR B QUIET
54 RINGMORE ROAD
CHATHAM
SB24 3HP

ALL TALK



Bill for 01457 984375

Total now due

Please pay by 22 November

Bill Totals

This is a summary of your bill.
Note that VAT is payable on the Line Rental and Cost of Calls, but not on the Payment Charge.

Cost of Calls	£46.52
Line Rental	£32.99
Total	£79.51
VAT @20%	£15.90
Payment Charges	£4.50
TOTAL NOW DUE	£99.91

Cost of Calls A summary of your calls and the associated costs are given below:

Type of call		Number of calls	Total duration (hours:minutes)	Charges	Total cost
UK calls	Daytime	50	03:45	3.25p per minute	£7.31
	Evening/Weekend	140	10:12	5.50p per call	£7.70
To a mobile	Daytime	56	01:51	12.50p per minute	£13.88
	Evening/Weekend	92	03:55	7.50p per minute	£17.63

Slideshow answers Completed bank statement

Mr I M Hardup
Penny Lane
Miserton
LS9 3TV

Account Summary

Opening balance	£112.04
Total payments in	£397.44
Total payments out	£460.08
Closing balance	£49.40

14 September to 5 October

Account Name
Mr I M Hardup

International Bank Account Number

GB09MIDL4043212345679

Branch Identifier Code

MIDLGB2113X

Sort Code	Account Number	Sheet Number
40-43-21	2345687	24

Your Bank Account details

<i>Date</i>	<i>Payment type & details</i>	<i>Paid out</i>	<i>Paid in</i>	<i>Balance</i>
13 Sep	BALANCE BROUGHT FORWARD			112.04
14 Sep	ATM CASH SEP14 DOWNTOWN 1 @09:50	50.00		62.04
20 Sep	CHQ 104569	30.99		31.05
24 Sep	CR PAYMEBACS		322.44	353.44
27 Sep	DC COSTAPACKET	12.99		340.50
28 Sep	CHQ 104570	8.65		331.85
2 Oct	CHQ 104571	17.50		314.35
5 Oct	CR PAID IN AT HSBC BANK PLC		75.00	
	DC SHOPALOT	239.95		149.40
5 Oct	ATM CASH OCT 5 DOWNTOWN @ 13:30	100		49.40
5 Oct	BALANCE CARRIED FORWARD			49.40