

LET'S GET TECHNICAL

Gareth John turns his attention to the thorny issue of incomplete records

When I last arrived at 221B Baker Street, Sherlock Holmes took one look at me and said: "You have just had a glass of claret with your wife at London zoo." Mind-reading? Magic? Not at all. It was a simple deduction, based on the red stain on my shirt cuff, a single ginger hair on my lapel and the smell of monkey droppings on my suit.

Similarly, sometimes in accounting when we think that a crucial figure is missing we may be able to deduce it from clues that we do have. Enter the exciting world of incomplete records, Dr Watson!

Using cost structures

If we know what the relationship between sales revenue, cost and profit is we can use this information to help us to deduce missing information. The two different relationships you need to know about are margins and mark-ups.

• Margin

A 'margin' is the **percentage of sales revenue** that profit represents. I think of it as 'margin on sales' as you would multiply the percentage margin **by the sales revenue**.

– Using margin to identify cost

If sales are £100 and your margin on sales is 10%, then you must have made a profit of $£100 \times 10\% = £10$. We can use this information to deduce that our costs must be the **sales revenue less the profit** which is £90. Alternatively, you can think of it this way: if profit is 10% of sales then costs must be 90% of sales and $£100 \times 90\% = £90$ cost.

– Using margin to identify sales

If you know that your margin on sales is 30% then your costs will be 70% of sales. If you know that your costs are £140 (and that this is 70% of sales) then you can deduce that sales must be $£140/70\%$ (or $£140/0.7$) giving £200.

• Mark-up

A 'mark-up' is the **percentage of cost** that profit represents. I think of it as 'mark-up on cost' as you would multiply the percentage mark-up **by the cost**.

– Using mark-up to identify sales

If cost is £500 and the mark-up is 10% then the profit will be £50. Sales must be the **cost plus the profit** which is £550. Another way to look at this is that since we add the mark-up of 10% to the cost, the sales will be 110% of the cost and $£500 \times 110\%$ (or $£500 \times 1.1$) is £550.

– Using mark-up to identify cost

With a mark-up of 20% you know that

sales will be 120% of (or 1.2 times) cost. If sales were £360 then we can deduce that cost must have been $£360/1.2 = £300$.

Using control accounts

If we know some of figures that would sit in a control account we can often establish a missing figure using a 'balancing figure' approach.

• Sales ledger control account (SLCA)

If we know that the opening balance on the SLCA is £100 owed to the business, that cash receipts from credit customers in the period were £500 and that the closing balance on the SLCA was £120 then we can deduce the value of credit sales made by balancing off the ledger account:

Sales ledger control account (SLCA)			
	£		£
Opening balance (known)	100	Receipts (known)	500
Credit sales (BF)	520	Closing balance (known)	<u>120</u>
	<u>620</u>		<u>620</u>

So we can deduce that credit sales must have been £520.



• Purchases ledger control account

If we know that the opening balance on the PLCA is £250 owed by the business, that cash payments to credit suppliers were £700 and that the closing balance on the PLCA was £280 then we can deduce that the value of credit purchases must be:

Purchase ledger control account (PLCA)			
	£		£
Payments (known)	700	Opening balance (known)	250
Closing balance (known)	<u>280</u>	Credit purchases (BF)	730
	<u>980</u>		<u>980</u>

Credit purchases must be £730.

Using cost of sales

Cost of sales (COS) consists of three key elements. It is calculated by adding opening inventory (1) to purchases (2) and then deducting closing inventory (3). If we know what the COS figure is, and we also know two of the elements that make up COS, we should be able to deduce the third.

Let's say that COS is £5,000, and that we know that opening inventory (1) was £1,000 and that purchases (2) were £5,200, but we don't know the value of closing inventory (3). Taking opening inventory plus purchases would give $£1,000 + £5,200 = £6,200$ so to get back to COS of £5,000 we must be deducting closing inventory of £1,200.



Here's one for you to try. Once you have finished your answer you can watch me work through my solution at www.firstintuition.co.uk/blog.html.

At 1 January, a business has inventory of £10,000 and trade payables of £40,000. During the year the business made sales of £400,000 and achieved a profit margin of 25%. They paid credit suppliers a total of £290,000 and at the end of the year trade payables were £65,000. On the 31 December a fire in the warehouse destroyed all units of inventory. Can you help Sherlock Holmes to identify the value of the inventory destroyed? **PQ**

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