

Demonstration of AVCO, FIFO and LIFO.

Here I am going to start a large question under the three methods to get you started. I'll give you the final answers too so you will know when you have got it right. It is a big question, much more than I would expect you to have to ever do for an exam, but then the practice will do you good!

Full data for the question below, but here is the first part only so that we can start the question.

Here is the extract we will use for the demo:

Stock movement data

	Units in	Purchase price per unit	Units out
Opening Stock	200	£ 1.00	
01/01/2016	100	£ 1.10	
02/01/2016			50
03/01/2016			120
04/01/2016	120	£ 1.15	
05/01/2016			100

First steps whatever method you are using.

1. Is there an Opening Stock?
2. Do Stock Movement.

There is an Opening Stock in this question, don't forget to include those units in the calculations. If you leave them out (if they exist) then you will be wrong all the way through your calculation.

The reason we do a Stock Movement now is to work out how many units there should be in the Closing Stock. This is a double check, so that when you get to your final answer you will know if the number of units you have left is correct. It is most easily done by adding all the 'ins' (include the Opening Stock) and then take away all the 'outs'. Obviously, the Closing Stock units is the same whatever method you use (AVC) < FIFO or LIFO), only the value will possibly be different.

The Closing Stock for the full question I will leave to you to work out, but for the demonstration data above it is $(200+100+120) - (50+120+100) = 420 - 270 = 150$.

A word on decimal places before we start.

When a question, like this one, is done in an Excel spreadsheet the computer works to millions of decimal places. That means that unless you save every number into your calculator or do it in an Excel spreadsheet; you will be working with a different number of decimal places. You will get slightly different numbers. I would suggest that you work to the first three decimal places (don't round, just take the first three). That should be close enough. Most exam questions are designed not to have millions of decimal places, so it shouldn't be a problem. Other questions, like this one, might have not been so cleverly crafted. If you are within a pound, you are probably right.

AVCO.

The principle is that we revalue all stock to the weighted average every time we get a new receipt.

Opening Stock	200	£ 1.000	£ 200.00
01/01/2016	100	£ 1.100	£ 110.00
Balance	300	£ 1.033	£ 310.00

So how have I done this? The total value of the 200 units of Opening Stock is £200, the total value of the 100 received is £110. This gives me 300 units worth a total of £310. If I divide £310 by 300 units, each unit is worth £1.033 each.

Really important! We didn't take £1.00 (the value per unit of the Opening Stock) and add £1.10 (the value per unit of the new stock added) to get £2.10 then divide by 2 to get £1.05. Don't! That is not a weighted average; it doesn't take into account the number of units you hold at each price.

Now we have a value of £1.033 per unit, all issues will be at that price until we have another receipt.

02/01/2016	-50	£ 1.033	-£ 51.67
03/01/2016	-120	£ 1.033	-£ 124.00
Balance	130	£ 1.033	£ 134.33

Note how we keep track of the number of units we have left, 130.

We then get another receipt. We then work out a weighted average for these new ones, along with our current stock. We would most likely get a new average value.

Balance	130	£ 1.033	£ 134.33
04/01/2016	120	£ 1.150	£ 138.00
Balance	250	£ 1.089	£ 272.33

Now, any further issues will be done at this new value of £1.089 until we get another receipt.

05/01/2016	-100	£ 1.089	-£ 108.93
Balance	150	£ 1.089	£ 163.40

Note that we have left at this point the 150 units that we predicted.

And so on.

My calculation of the total value of the Closing Stock for this full question is £86.89. See if you can get to that.

FIFO.

First In First Out, so we basically use them up from the top of the list first – that will be the Opening Stock if there is one. The challenge with this method (and LIFO) is keeping a running total of what you have left at each value (each receipt).

In this question we have an Opening Stock and a delivery before our first issue, but still they come from the top of the list, the Opening Stock.

	Units in	Purchase	Units out
Opening Stock	200	£ 1.00	
01/01/2016	100	£ 1.10	

Our first issue is 50. They all come from the Opening Stock so the issue is:

02/01/2016			50	£ 1.00	£ 50.00
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We now need to amend our stock levels to reflect this:

Opening Stock	150	£ 1.00
01/01/2016	100	£ 1.10

Our next issue is 120 and these too can come from the Opening Stock as we have 150 left.

03/01/2016			120	£ 1.00	£ 120.00
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Our stock levels need to be amended:

Opening Stock	30	£ 1.00
01/01/2016	100	£ 1.10

The next transaction is a receipt, so we have amended stock information again:

Opening Stock	30	£ 1.00
01/01/2016	100	£ 1.10
04/01/2016	120	£ 1.15

Now we have an issue of 100 to make. Remember, start at the top.

We will issue the 30 left from the Opening Stock and get the rest we need, a further 70, from the receipt on the 1st January.

Our issue will be made up like this:

05/01/2016			30	£ 1.00	£ 30.00
			70	£ 1.10	£ 77.00
			100		£ 107.00

Now we need to make sure we have kept track of our stock levels.

Opening Stock	0	£	1.00	£	-
01/01/2016	30	£	1.10	£	33.00
04/01/2016	120	£	1.15	£	138.00
	150			£	171.00

Note the 150 units left at a total value of £171. It was £163.40 when we got to this point under AVCO.

My answer for the closing value for the full question is £84.25. Check you have got the right number of units.

LIFO

Now the awkward one!

Two things to remember – we are working up the list, not down and **VITALLY IMPORTANT!**, you can't issue them if they haven't arrived!

The second point is where most people get these questions wrong. You can't start at the bottom of the list; you can't issue stuff that arrived on the 4th January until after the 4th January.

Yes, we work up the list, but it is up from the date of the issue, not up from the bottom.

Keeping a tally of what has been used is often a bit more difficult as you can end up with units left from the Opening Stock and early deliveries when you are at the end of the month. You'll see when you do the full question.

This is what we have got just before the first issue:

	Units in	Purchase	Units out
Opening Stock	200	£ 1.00	
01/01/2016	100	£ 1.10	

Our first issue is going to be from those received last; that is on the 1st.

02/01/2016			50	£ 1.10	£ 55.00
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We now need to make sure we have recorded the right levels of stock:

Opening Stock	200	£ 1.00
01/01/2016	50	£ 1.10

Note that it is the receipt on the 1st that has been reduced.

We now have another issue, this time of 120. These are going to come first from the 50 from the 1st, with the balance coming from the Opening Stock.

03/01/2016			50	£ 1.10	£ 55.00
			70	£ 1.00	£ 70.00
			120		£ 125.00

So our stock now shows as:

Opening Stock	130	£ 1.00
01/01/2016	0	£ 1.10

We get another receipt:

Opening Stock	130	£ 1.00
01/01/2016	0	£ 1.10
04/01/2016	120	£ 1.15

And so on to our next issue of 100 units. These will come from the last to be received, those we got on the 4th.

05/01/2016			100	£	1.15	£ 115.00
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And our stock levels are now:

Opening Stock	130	£	1.00	£ 130.00
01/01/2016	0	£	1.10	
04/01/2016	20	£	1.15	£ 23.00
	150			£ 153.00

Note again the 150 unit in stock that we were expecting, but a different value.

My answer for the final closing value for the full question is £84.00.

Go on, have a go at the full thing.

Stock movement data

	Units in	Purchase price per unit	Units out
Opening Stock	200	£ 1.00	
01/01/2016	100	£ 1.10	
02/01/2016			50
03/01/2016			120
04/01/2016	120	£ 1.15	
05/01/2016			100
06/01/2016	180	£ 1.20	
07/01/2016			220
08/01/2016	80	£ 1.25	
09/01/2016			140
10/01/2016	150	£ 1.30	
11/01/2016			130
12/01/2016	150	£ 1.35	
13/01/2016			50
14/01/2016	100	£ 1.35	
15/01/2016	60	£ 1.40	
16/01/2016			200
17/01/2016	150	£ 1.35	
18/01/2016	50	£ 1.30	
19/01/2016	40	£ 1.25	
20/01/2016			50
21/01/2016	80	£ 1.25	
22/01/2016			80
23/01/2016			110
24/01/2016	100	£ 1.20	
25/01/2016			220
26/01/2016	150	£ 1.15	
27/01/2016			200
28/01/2016	200	£ 1.10	
29/01/2016			150
30/01/2016	75	£ 1.05	
31/01/2016			85

AVCO = £86.89

FIFO = £84.25

LIFO = £84.00