

- E9-1
1. FIFO
 2. FIFO
 3. LIFO
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 6. Average costing
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 10. LIFO

E9-2

a.

	FIFO	LIFO	AVERAGE
Cost of goods available for sale	\$34,350	\$34,350	\$34,350
(Ending inventory)	(8,100)	(5,500)	(6,708)
Cost of goods sold	\$26,250	\$28,850	\$27,642
Computation of inventory:	600 @ 7 \$4,200 600 @ 6.50 3,900	1,000 @ 4.50 \$4,500 200 @ 5.00 1,000	\$34,350 / 6,150 = \$ 5.59
	\$8,100	\$5,500	\$5.59 × 1,200 = \$6,708

b.

	FIFO	LIFO	AVERAGE
Gross Profit			
Sales (4,950 units @ \$10)	\$49,500	\$49,500	\$49,500
(Cost of goods sold)	(26,250)	(28,850)	(27,642)
Gross Profit	\$23,250	\$20,650	\$21,858
Gross Profit Percentage			
Gross profit	\$23,250	\$20,650	\$21,858
Sales	49,500	49,500	49,500
Gross Profit Percentage	47%	41.72%	44.16%

c. A recent start-up online retailer would prefer to show the highest profits possible; therefore, Maypen would probably use FIFO. A leading bricks and mortar retailer would probably want to reduce taxable income and would probably

use LIFO.

E9-3a.

Instructors may find the comparison between Intel's projections and the actual results interesting.

(In millions)

Quarter ended:	30-Dec 2000	Projected change	Projected income 31-Mar 2001
Net revenues	\$8,702	25% decrease	\$6,527
Cost of sales	49% of sales 3,230	3,198	
Gross Profit	5,472	51% of sales	3,329
Operating expenses	3,279	15% decrease	2,787
Net income	\$2,193		\$ 542

Quarter ended:	Percent	Actual Results 31-Mar 2001	Percent
Net revenues	100%	\$6,680	100%
Cost of sales	49%	48%	
Gross Profit	51%	3,454	52%
Operating expenses	43%	2,969	44%
Net income	8%	\$ 485	7%

While the company was quite accurate in its sales and cost of sales projections, it overestimated the percentage decrease in expenses. While the company projected operating expenses at \$2.8 billion, the actual expenses were just shy of \$3 billion. The company's gross profit margin of 52% was substantially below that of the fourth quarter of 2000, which was 63%. Also, a comparison with the quarter ended April 1, 2000, shows the serious deterioration in Intel's results over the year.

	Actual Results Quarter ended 3/31/01	Actual Results Quarter ended 4/01/00	Percentage Change
Sales	\$6,680	\$7,993	-16.43%

Cost of Sales	3,226	2,989	7.94%
Gross Margin	3,454	5,004	-30.98%
Operating Expenses	2,969	2,308	28.62%
Net income	\$ 485	\$2,696	-82.01%

b.

	30-Dec	30-Sep	1-Jul	1-Apr
Quarter ended:	2000	2000	2000	2000
Net revenues	\$8,702 100%	\$8,731 100%	\$8,300 100%	\$7,993 100%
Cost of sales	3,230 37%	3,148 36%	2,989 37%	3,283 40%
Net income	\$2,193 25%	\$2,509 29%	\$3,137 38%	\$2,696 34%

The results reflect the significantly declining profit margins for chip makers. Net income fell to 25% of sales from 38% just six months earlier. While sales declined from the third quarter to the fourth quarter, cost of goods sold increased from 36% to 37% of sales.

E9-4

Dell's results show that while the company is still growing, the rate of growth slowed from 1999 to 2000. Sales increased 48% from 1998 to 1999, but the growth rate slowed to 38.5% from 1999 to 2000. Profits grew 54.5% from 1998 to 1999, but the rate of growth slowed dramatically to 14.1% from 1999 to 2000. In addition, while total profits increased from 1998 to 1999, profit as a percentage of sales declined significantly from 1999 to 2000. Common size percentages reveal the following:

	Jan 28, 2000	Jan 29, 1999	Feb 1, 1998
	Percent	Percent	Percent
Net revenue	\$25,265 100.0	\$18,243 100.0	\$12,327 100.0
Gross margin	5,218 20.7	4,106 22.5	2,722 22.1
Operating income	2,263 8.9	2,046 11.2	1,316 10.7
Net income	1,666 6.6	1,460 8.0	944 7.7

Note: The negative trend continued in 2001. In January, the company issued a profit warning, stating that fourth quarter net income would fall far short of analysts' expectations. To maintain market share, the company dropped the selling price of its computers. Estimates were that the gross profit margin would fall to about 18% from 2000's 21%. (The Wall Street Journal, January 23, 2001)

E9-5

a.	FIFO	LIFO	AVERAGE
Cost of goods			

available for sale	\$44,300	\$44,300	\$44,300
(Ending inventory)	(10,080)	(12,400)	(11,232)
Cost of goods sold	\$34,220	\$31,900	\$33,068
Computation of inventory:	1,200 @ 5.50 \$ 6,600	1,000 @ 7.00 \$ 7,000	\$44,300 /
	600 @ 5.80 3,480	800 @ 6.75 5,400	7,100
	\$10,080	\$12,400	=6.24
			\$6.24 × 1,800 =
	\$11,232		

b.

Gross Profit		
Sales (2,500 @ \$12 + 2,800 @ \$11)	\$60,800	\$60,800
(Cost of goods sold) (33,068)	(34,220)	(31,900)
Gross Profit	\$26,580	\$28,900
	\$27,732	
Gross Profit Percentage		
Gross profit	\$26,580	\$28,900
	\$27,732	
/ Sales	60,800	60,800
	60,800	
	= 43.7%	= 47.5%
	= 45.6%	

c. In an environment of falling costs and over capacity, LIFO will result in the highest gross profit and highest net income; FIFO will result in the lowest gross profit and lowest net income. Companies wanting to show growth in profits will prefer LIFO; companies wanting to minimize income taxes will prefer FIFO. Average results is a profit in between FIFO and LIFO. The results are the opposite of what would be achieved with rising prices, where FIFO shows the highest profit and LIFO the lowest.

E9-6

	FIFO	LIFO
Ending inventory	\$10,080	\$12,400
LOCM inventory value	9,540	9,540
Writedown required	\$ 540	\$ 2,860
LOCM inventory value equals 1,800 × \$5.30 = \$9,540		

		Dr	Cr
a.	Cost of goods sold	540	
	Inventory		540
b.	Cost of goods sold	2,860	
	Inventory		2,860

Alternatively, a separate loss account (Loss on LOCM writedown) could be debited instead of debiting cost of goods sold.

c. For decreasing prices, such as those that have occurred in the electronic components and computer markets, FIFO would have an inventory value closer to market. Firms would prefer FIFO, which would reduce the amounts of inventory writedowns required.

E9-7

a. Revenues are the same under all flow assumptions. Revenue = 400 × \$20 = \$8,000.

	LIFO	FIFO
Revenue	\$8,000	\$8,000
Cost of goods sold	4,400*	4,000**
Gross margin	\$3,600	\$4,000
*200 × \$10 + 200 × \$12		
**200 × \$10 + 200 × \$10		

b.

	LIFO	FIFO
Revenue	\$8,000	\$8,000
Cost of goods sold	4,800*	4,000**
Gross margin	\$3,200	\$4,000
*400 × \$12		
**400 × \$10		

c. They differ because the timing of sales does not always correspond with the timing of inventory acquisitions. In this example, the final inventory price for the month wasn't known when the first sales were made, so LIFO (perpetual) had to use the latest price as of that moment.