

Name: Solution

NOTE: Rounding error within \$10 is acceptable on all time-value-of-money problems.

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1. Which of the following would be subtracted from net income to obtain *cash flow from operations* using the indirect method?

- a. Depreciation expense.
- b. An increase in accounts receivable.
- c. An increase in accounts payable.
- d. A decrease in prepaid expenses.
- e. Two of the above would be subtracted from net income

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2. Which balance sheet accounts are affected by financing activities?

- a. Current assets.
- b. Current liabilities.
- c. Long-term assets.
- d. All of the above
- e. None of the above

Liabilities (typically long-term) & Equity are affected

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3. Total operating expenses on Legg Company's income statement for last year totaled \$260,000. During the year the accrued liabilities decreased by \$12,000 and prepaid expenses (an asset account) increased by \$18,000. Depreciation expense for the year was \$25,000. Based on this information, operating expenses adjusted to cash basis would be:

- a. \$255,000.
- b. \$315,000.
- c. \$205,000.
- d. \$265,000.
- e. None of the above

Accrued expenses	260,000	
Accrued liabilities	12,000	(more cash used to pay them off)
prepaid expense	18,000	(more cash used to build the asset)
depreciation	-25,000	(not a cash expense)
	<u>\$ 265,000</u>	

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4. Last year Frye Company's cash account increased by \$17,000. Net cash flows from investing activities was (\$40,000). Net cash flows from financing activities was \$2,000. On the statement of cash flows, the net cash flows from operating activities was:

- a. \$17,000.
- b. \$(21,000).
- c. \$55,000.
- d. \$(38,000).
- e. \$19,000.

CFFI CFFF Increase in cash
 $CFFO - 40,000 + 2,000 = 17,000$

$17,000 + 38,000 = CFFO = 55,000$

v2
29

period cost

5. Carson Manufacturing Company paid cash for commissions paid to sales staff. Which of the following choices accurately reflects how this event would affect the company's financial statements?

	Assets	=	Liab.	+	Equity	Rev.	-	Exp.	=	Net Inc.	Cash Flow
a.	+	-	NA		NA	NA		NA		NA	- OA
b.	-		NA		-	NA		+		-	- OA
c.	-		NA		-	NA		NA		NA	- OA
d.	+	-	NA		NA	NA		+		-	- OA
e.	NA		NA		NA	NA		NA		NA	- OA

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6. At a production and sales level of 3,000 units, Midas Company incurred \$60,000 of fixed cost and \$36,000 of variable cost. When 4,000 units of product are produced and sold the company's cost per unit is:

- a. \$32.
- b. \$27.
- c. \$24.
- d. \$29.
- e. None of the above

$$VC = \frac{\$36,000}{3,000} = \$12 \text{ per unit (true for All production levels)}$$

$$FC = \frac{\$60,000}{4,000} = \$15 \text{ per unit}$$

$$\text{Total} = \$27 \text{ per unit}$$

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7. Handy Packing produces backpacks. In 2005, its highest and lowest production levels occurred in July and January, respectively. In July, it produced 4,000 backpacks at a total cost of \$110,000. In January, it produced 2,500 backpacks at a total cost of \$87,500. Using the high/low method, estimated monthly fixed costs are:

- a. \$87,500
- b. Less than \$30,000
- c. More than \$87,500
- d. \$50,000
- e. None of the above

$$\frac{\$110,000 - \$87,500}{4,000 - 2,500} = \frac{\$22,500}{1,500} = \$15 \text{ VC/unit}$$

$$TC = FC + (VC \times \text{units})$$

$$87,500 = FC + (\$15 \times 2,500)$$

$$FC = 50,000$$

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8. Employees of DTI, Inc. worked 1,600 direct labor hours in January and 1,000 direct labor hours in February. DTI expects to use 18,000 direct labor hours during the year, and expects to incur \$22,500 of Worker's Compensation insurance cost for the year. The cash payment for this cost will be paid in April. How much insurance premium should be allocated to products made in January and February?

- a. \$7,200; \$5,500
- b. \$2,000; \$1,250
- c. \$4,000; \$2,500
- d. \$2,000; \$5,500
- e. None of the above

$$\frac{\$22,500}{18,000} = \$1.25 \text{ OH rate}$$

$$\text{Jan } 1,600 \text{ hrs} \times 1.25 = \$2,000$$

$$\text{Feb } 1,000 \text{ hrs} \times 1.25 = \$1,250$$

9. Use the following data for Fireware Software Corporation:

Sales price per unit	\$44.95	} VC = 21.37
Variable manufacturing cost per unit	\$17.03	
Variable sales commissions per unit	\$ 3.20	
Variable shipping expense per unit	\$ 1.14	
Fixed administrative cost, per month	\$12,200	} \$ 14,469 FC
Other fixed costs, per month	\$2,269	
Average production	2,100 units per month	

How many units must Fireware sell in order to make a \$50,000 profit? (Round to the nearest whole unit.)

- a. 505
- b. 1,090
- c. 1,708
- d. 2,734
- e. None of the above

$$(44.95 - 21.37) \times \text{units} - 14,469 = 50,000$$

$$23.58 \times \text{units} = 64,469$$

$$\text{units} = 2734$$

10. Chicken Parts Express (CPE) wants to add a new drumsticks dinner to its menu. The following data apply to the new drumsticks dinner.

Budgeted sales	40,000 meals per year	} CM = \$2 \cdot \text{meals} - FC = 0
Sales price	\$5 per meal	
Variable costs	\$3 per meal	
Fixed costs	\$20,000 per year	

The break-even point for the drumsticks dinner is _____ meals per year.

- a. 500 meals
- b. \$5,000
- c. 15,000 meals
- d. 5,000 meals
- e. None of the above

$$\$2 \cdot \text{meals} = 20,000$$

$$\text{meals} = 10,000$$

11. Three Product Company (TPC) makes the following three products:

	Product 1	Product 2	Product 3
Direct Material Cost	\$25,000	\$30,000	\$35,000
Direct Labor Cost	\$30,000 +	\$40,000 +	\$50,000
Direct Labor Hours (estimated & actual)	1,200 hours	1,800 hours	2,000 hours

$$= \$120,000$$

Factory overhead is estimated to be \$30,000 and is applied based on direct labor dollars. This overhead cost is not traceable to any particular product.

Factory overhead allocated to Product 2 is

- a. \$4,800
- b. \$7,500
- c. \$10,000
- d. \$10,800
- e. None of the above

$$\frac{\$30,000}{\$120,000} = 25\%$$

$$\$40,000 \times 25\% = \$10,000$$

12. A condensed income statement for Martco follows: (amounts are shown in thousands)

Products	F	G	H	Total
Sales (total)	\$200	\$180	\$320	\$700
Unit-level Variable Cost (total)	(120)	(160)	(200)	(480)
Contribution Margin	80	20	120	220
Facility-Level Fixed Cost	(25)	(30)	(40)	(95)
Income (Loss)	\$ 55	\$(10)	\$ 80	\$125

Martco's management is considering whether to discontinue manufacturing product G at the beginning of the next year. Doing so will have no effect on total fixed costs and no effect on the sales or variable costs of products F and H. The change in income that would result from discontinuing product G is

- a. \$10,000 increase
- b. \$10,000 decrease
- c. \$20,000 decrease
- d. \$30,000 increase
- e. \$30,000 decrease

Foregone if G is discontinued

13. Tex Toolery is operating at 80% of its productive capacity. It is currently purchasing for \$20 each a part used in its manufacturing operation. Tex estimates it could make the part internally for a total cost of \$24 per unit, consisting of \$18 of unit-level production costs and \$6 of facility-level costs that are currently attributed to other products. Tex usually purchases 50,000 units of the part each year. These units could be manufactured using Tex's excess capacity. What is the differential increase or decrease in cost derived from making the part rather than purchasing it?

- a. \$100,000 cost decrease
- b. \$100,000 cost increase
- c. \$200,000 cost increase
- d. \$1,000,000 cost increase
- e. None of the above

$$\begin{array}{r}
 \$20 \text{ purchased price/unit} \\
 - 18 \text{ VC/unit} \\
 \hline
 2 \text{ difference} \\
 \times 50,000 \text{ units} \\
 \hline
 \$100,000 \text{ savings}
 \end{array}$$

14. The Fargo Company produces three products. It is considering eliminating one of these products because of reported losses. Which of the following costs should not be considered in making this decision?

- a. factory-wide depreciation costs
- b. material costs
- c. packaging costs
- d. set-up costs
- e. all costs should be considered

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15. In 2007, Baytown Company incurred the following costs in producing its life jackets:

SC#A	—	Direct Material Costs	\$75,000
		Direct Labor Costs	60,000
		Advertising Costs	5,000
		Overhead Costs	45,000

production costs = $\frac{\$180,000}{10,000 \text{ units}} = \$18.00/\text{unit}$

Assuming that Baytown produced 10,000 life jackets and priced them at production cost plus 40%, the selling price of the product was

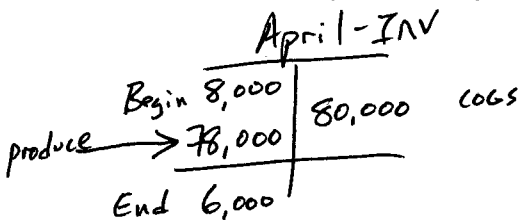
- a. \$21.00.
- b. \$22.40.
- c. \$23.10.
- d. \$25.00.
- e. None of the above.

$\$18.00 \times 1.4 = \25.20

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16. April's production budget has ^{XP} been prepared. Management wants the amount of ending inventory each month to be equal to 10% of the next month's cost of goods sold. April cost of goods sold is projected at \$80,000 and May cost of goods sold is projected at \$60,000. Ending inventory at the end of March was \$8,000. Based on this information, how much inventory should be produced during April?

- a. \$82,000
- b. \$86,000
- c. \$72,000
- d. \$78,000
- e. None of the above



MAY COGS = $\frac{\$60,000 \times 10\%}{1} = \$6,000$

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17. XYZ Company projected unit sales for the last four months of the year as shown below:

September	3,000
October	3,100
November	4,100
December	5,600

All of XYZ's sales are on credit. The company's past records show collection of credit sales as 60% in the month of sale and the balance in the following month. If inventory units are sold for \$25, then total cash collections in November will be

- a. \$93,500.
- b. \$37,400.
- c. \$102,500.
- d. \$61,500.
- e. None of the above

November $4,100 \times 60\% = 2460$
 October $3,100 \times 40\% = 1240$
 3700 units
 $\times \$25/\text{unit}$
 \$92,500

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18. Starmax Company pays workers producing the product Lotrim an average standard wage of \$9 per hour. The standard amount of time required to produce a case of Lotrim is 2 hours. In January, Starmax produced 18,000 cases of Lotrim at a total actual labor cost of \$323,000. During January, Starmax actually used 34,000 labor hours. Based on this information the labor usage variance is

- a. \$18,000 unfavorable.
- b. \$18,000 favorable.
- c. \$34,000 favorable.
- d. \$34,000 unfavorable.
- e. None of the above.

MP \$P \$9 SP \$9
 AQ 34,000 SQ 36,000 = (2hr x 18,000)
 $2,000 \times \$9 = \$18,000 F$

19. Stillwater Inc. reported the following information for 2005 and 2006:

	2005	2006
Accounts receivable	\$51,000	\$57,000
Inventories	42,000	39,000
Accounts payable	43,000	48,000
Net income		49,000
Depreciation Expense		8,000

Δ
6,000
3,000
5,000

If Stillwater Inc. uses the indirect method to prepare the operating activities section of the statement of cash flows, what amount will be reported as net cash flows from operating activities for 2006?

- a. \$49,000
- b. \$55,000
- c. \$57,000
- d. \$59,000
- e. \$72,000

NI 49,000
 Depn 8,000
 Δ A/R (6,000)
 Δ Inv + 3,000
 Δ A/P + 5,000
 CFFO 59,000

20. Accounts receivable arising from sales to customers amounted to \$35,000 and \$40,000 at the beginning and end of the year, respectively. Income reported on the income statement for the year was \$120,000. Exclusive of the effect of other adjustments, the cash inflows from operating activities to be reported on the statement of cash flows is:

- a. \$120,000.
- b. \$125,000.
- c. \$155,000.
- d. \$115,000.
- e. \$195,000.

Δ AR = (\$5,000) (bad for cash)
 120,000
 \$ 115,000

3 21. Consolidated Company makes cardboard boxes. During the most recent accounting period Consolidated paid \$60,000 for raw materials, \$48,000 for labor, and \$52,000 for overhead costs that were incurred to make boxes. Consolidated started and completed 400,000 boxes. SG&A expenses amounted to \$40,000. Consolidated desires to earn a gross margin that is equal to 40% of product cost. Based on this information the selling price per box is:

- a. \$0.40
- b. \$0.56
- c. \$0.50
- d. \$0.70
- e. None of the above

DM + DL + OH = \$ 160,000
 400,000 boxes = 40¢/box
 Product Cost

price = 1.4 × 40¢
 = 56¢

22. Bright Smile, Inc. (BSI) makes a bleach that is used to whiten teeth. BSI expects to use 2 ounces of Cloroxon per bottle of whitener. Cloroxon is expected to cost \$0.20 per ounce. Actual materials cost amounted to \$0.23 per ounce. BSI expected to make and sell 1,000,000 bottles of whitener during the accounting period. BSI actually used 2,047,500 ounces to produce 1,050,000 bottles.

The materials price variance for Cloroxon is

- a. \$61,425 unfavorable.
- b. \$61,425 favorable.
- c. \$20,000 favorable.
- d. \$20,000 unfavorable.
- e. None of the above

$$\begin{array}{r}
 \text{AP } 23¢ \quad \text{SP } 20¢ \quad \text{SP} \\
 \text{AQ } 2,047,500 \quad \text{AQ } 2,047,500 \quad \text{SQ} \\
 \hline
 3¢ \times 2,047,500 = \\
 \$61,425 \text{ U}
 \end{array}$$

23. The AML Company was started on January 1, 2007. The company incurred the following transactions during the year. (Assume all transactions are for cash unless otherwise indicated.)

- 1. Acquired \$3,500 by issuing common stock.
- 2. Purchased \$900 of direct raw materials.
- DM 3. Used \$700 of these direct raw materials in the production process.
- DL 4. Paid production workers \$900 cash.
- OH 5. Paid \$800 for manufacturing overhead (assume applied and actual overhead are the same).
- 6. Started and completed 100 units of inventory.
- 7. Sold 80 units at a price of \$30 each.
- 8. Paid \$400 for selling and administrative expenses.

The amount of net income recognized by AML in 2007 is

- a. \$80.
- b. \$1,040.
- c. \$480.
- d. \$240.
- e. \$2,400.

$$\begin{array}{r}
 \$2400 = \$24 \text{ per unit} \\
 \hline
 100 \\
 \\
 \text{GM } \$6 \text{ /unit} \\
 \hline
 \times 80 \\
 480 \\
 \hline
 - 400 \\
 \hline
 80 \\
 \text{total GM } 56 \text{ GA}
 \end{array}$$

24. The following amounts pertain to the ABC Company for 2008:

$$\begin{array}{r}
 \text{Estimated Overhead Costs} \quad \$108,000 \\
 \hline
 \text{Estimated Direct Labor Hours} \quad 6,750 \\
 \hline
 = \$16
 \end{array}$$

If actual overhead costs for the year were \$106,000 and actual direct labor worked was 7,000 hours, then overhead would be

- a. overapplied by \$2,000.
- b. underapplied by \$2,000.
- c. overapplied by \$4,000.
- d. underapplied by \$4,000.
- e. None of the above

$$\begin{array}{r}
 \text{MOH} \\
 \hline
 \text{Actual } 106,000 \quad | \quad 112,000 \text{ Applied} \\
 \hline
 \text{Over Applied by } \$6,000
 \end{array}$$

25. Southern Industries uses job order costing. The following information pertains to a recent month:

	Job 1	Job 2	Job 3
Direct Materials	\$50	\$60	\$30
Direct Labor	20	30	35

Southern applies overhead at the rate of 200% of direct labor costs. By the end of the month, both Job 1 and Job 2 had been completed and sold. Job 3 was still in process.

At month-end, what was the balance in work in process inventory?

- a. \$260
- b. \$135
- c. \$ 60
- d. \$ 40
- e. None of the above

Job 3 - WIP

DM	30
DL	35
OH	70
End	135

26. Elena Wallace invested \$150,000 in a project that pays her an even amount per year for 10 years. The payback period is 6 years. What are Elena's yearly cash inflows from the project?

- a. \$150,000
- b. \$15,000
- c. \$25,000
- d. \$90,000
- e. cannot be determined from this information

$$\frac{150,000}{6} = \$25,000 \text{ per year}$$

27. Morgan Clinical Practice is considering an investment in new imaging equipment that will cost \$400,000. The equipment is expected to yield cash inflows of \$80,000 per year for a six year period. At the end of the sixth year, the firm expects to recover \$150,000 from the sale of the equipment. Morgan set a required rate of return at 10%. What is the net present value of the investment?

- a. (\$33,000)
- b. \$45,200
- c. \$433,000
- d. \$33,000
- e. None of the above

$$PVA_{n=6, i=10\%} = \frac{4,355}{\times 80,000} = 348,400$$

$$PV_{n=6, i=10\%} = 0.5645 \times 150,000 = 84,675$$

$$\sim \$433,000 - 400,000 \text{ cost} = \$33,000$$

28. Elizabeth Myers invested in a project that required an initial amount of \$1,560 and returned one cash inflow of \$12,000 at the end of the 18th year. What is the internal rate of return for this investment?

- a. 8%
- b. 10%
- c. 12%
- d. 14%
- e. None of the above

$$PV = \text{factor}_{n=18, i=?} \times Pym?$$

$$1,560 = \text{factor} \times \$12,000$$

$$0.13 = \text{factor}_{n=18}$$

$$i = 12\%$$

$$\text{OR } 1,560 \times (1+i)^{18} = 12,000$$

$$i = 12\%$$

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25

29. Shandling Company had operating income of \$70,000, sales of \$218,750, and a turnover of 0.5. What is Shandling's ROI?

- a. 32%
- b. 50%
- c. 16%**
- d. 64%
- e. cannot be determined from this information

$$\text{turnover} = \frac{\text{sales}}{\text{investment}}$$

$$\text{investment} = \frac{218,750}{0.5} = 437,500$$

$$\text{ROI} = \frac{70,000}{437,500} = 0.16$$

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30. Coriander Company is considering a project with an initial investment of \$426,800 in new equipment that will yield annual net cash flows of \$80,000, and will be depreciated at \$53,350 per year over its eight year life. What is the internal rate of return?

- a. 8%
- b. 10%**
- c. 12%
- d. 14%
- e. None of the above

PVA

$$426,800 = \text{factor} \times 80,000$$

$n=8$
 $i=?$

$\$426,800 \times 8 = \text{fully depreciated}$

factor = 5.335
 $n=8$
 $i = 10\%$

27

31. FDR Bottling Company produces a soft drink that is sold for two dollars. The company pays \$800,000 in production costs, half of which are fixed costs. Selling, general, and administrative costs amount to \$300,000 (of which \$75,000 are fixed costs). Assuming production and sales of 600,000 units, what is the company's contribution margin?

- a. \$575,000**
- b. \$100,000
- c. \$ 25,000
- d. \$(25,000)
- e. None of the above

$\times \$2/\text{unit}$

1,200,000 SALES

- 400,000 variable production cost

- 225,000 variable SG&A

575,000 CM

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32. Wayne Company's sales budget shows the following expected total sales:

Month	Sales
January	\$25,000
February	\$30,000
March	\$35,000
April	\$40,000

$\times 70\% = 24,500 \times 72\% = 17,640$ cash collected on March's credit sales

$\times 30\% = 12,000$ April's cash sales

28,000
 $\times 25\%$
\$ 7,000 cash collected on April credit sales

The company expects 70% of its sales to be on account (credit sales). Credit sales are collected as follows: 25% in the month of sale, 72% in the month following the sale, and the remainder is uncollectible (and written off in the month following the sale). The total cash collections during April would be

- a. \$14,350
- b. \$15,750
- c. \$20,550
- d. \$24,640
- e. None of the above.**

17,640

12,000

7,000

\$ 36,640