CHAPTER 12

Accounting for Partnerships

ASSIGNMENT CLASSIFICATION TABLE

Learning Objectives	Questions	Brief Exercises	Do It!	Exercises	A Problems	B Problems
1. Identify the characteristics of the partnership form of business organization.	1, 2, 3, 4, 17		1	1		
2. Explain the accounting entries for the formation of a partnership.	5	1, 2		2, 3	1A	1B
3. Identify the bases for dividing net income or net loss.	6, 7, 8, 9, 10	3, 4, 5	2	4, 5	2A	2B
4. Describe the form and content of partnership financial statements.	11			6, 7	1A, 2A	1B, 2B
5. Explain the effects of the entries to record the liquidation of a partnership.	12, 13, 14, 15, 16	6	3, 4	8, 9, 10	3A	3B
*6. Explain the effects of the entries when a new partner is admitted.	18, 19, 20, 21	7, 8		11, 12, 15	4A	4B
*7. Describe the effects of the entries when a partner withdraws from the firm.	22, 23, 24	9, 10		13, 14, 15	5A	5B

***Note:** All **asterisked** Questions, Exercises, and Problems relate to material contained in the appendix to the chapter.

ASSIGNMENT CHARACTERISTICS TABLE

Problem Number	Description	Difficulty Level	Time Allotted (min.)
1A	Prepare entries for formation of a partnership and a balance sheet.	Simple	20–30
2A	Journalize divisions of net income and prepare a partners' capital statement.	Moderate	30–40
3A	Prepare entries with a capital deficiency in liquidation of a partnership	Moderate	30–40
*4A	Journalize admission of a partner under different assumptions.	Moderate	30–40
*5A	Journalize withdrawal of a partner under different assumptions.	Moderate	30–40
1B	Prepare entries for formation of a partnership and a balance sheet.	Simple	30–40
2B	Journalize divisions of net income and prepare a partners' capital statement.	Moderate	30–40
3B	Prepare entries and schedule of cash payments in liquidation of a partnership.	Moderate	30–40
*4B	Journalize admission of a partner under different assumptions.	Moderate	30–40
*5B	Journalize withdrawal of a partner under different assumptions.	Moderate	30–40

WEYGANDT ACCOUNTING PRINCIPLES 11E
CHAPTER 12
ACCOUNTING FOR PARTNERSHIPS

Number	LO	BT	Difficulty	Time (min.)
BE1	2	AP	Simple	2–4
BE2	2	AP	Simple	3–5
BE3	3	AP	Simple	4–6
BE4	3	AP	Simple	4–6
BE5	3	AP	Simple	6–8
BE6	5	AP	Simple	2–4
BE7	6	AP	Simple	2–4
BE8	6	AP	Simple	3–5
BE9	7	AP	Simple	2–4
BE10	7	AP	Simple	3–5
DI1	1	C	Simple	2–4
DI2	3	AP	Simple	4–6
DI3	5	AP	Simple	8–10
DI4	5	AP	Moderate	6–8
EX1	1	C	Simple	6–8
EX2	2	AP	Simple	6–8
EX3	2	AP	Simple	4–6
EX4	3	AP	Simple	10–12
EX5	3	AP	Simple	8–10
EX6	4	AP	Simple	6–8
EX7	4	AP	Simple	8–10
EX8	5	AP	Simple	6–8
EX9	5	AP	Simple	6–8
EX10	5	AP	Simple	6–8
EX11	6	AP	Simple	4–6
EX12	6	AP	Simple	6–8
EX13	7	AP	Simple	4–6
EX14	7	AP	Moderate	8–10
EX15	6, 7	AP	Moderate	6–8
P1A	2, 4	AP	Simple	20–30
P2A	3, 4	AP	Moderate	30–40
P3A	5	AP	Moderate	30–40

Number	LO	BT	Difficulty	Time (min.)
P4A	6	AP	Moderate	30–40
P5A	7	AP	Moderate	30–40
P1B	2, 4	AP	Simple	20–30
P2B	3, 4	AP	Moderate	30–40
P3B	5	AP	Moderate	30–40
P4B	6	AP	Moderate	30–40
P5B	7	AP	Moderate	30–40
BYP1	—	C	Simple	8–10
BYP2	1–3	C, E	Simple	15–20
BYP3	1, 2, 5	S	Simple	10–15
BYP4	3	E	Simple	10–15
BYP5	1	S	Simple	15–20

Correlation Chart between Bloom's Taxonomy, Learning Objectives and End-of-Chapter Exercises and Problems

Learning Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Identify the characteristics of the partnership form of business organization.		Q12-1 Q12-17 Q12-2 DI12-1 Q12-3 E12-1 Q12-4				
2. Explain the accounting entries for the formation of a partnership.			Q12-5 E12-3 BE12-1 P12-1A BE12-2 P12-1B E12-2			
3. Identify the bases for dividing net income or net loss.		Q12-6 Q12-7 Q12-9	Q12-8 DI12-2 Q12-10 E12-4 BE12-3 E12-5 BE12-4 P12-2A BE12-5 P12-2B			
4. Describe the form and content of partnership financial statements.		Q12-11	E12-6 P12-2A E12-7 P12-1B P12-1A P12-2B			
5. Explain the effects of the entries to record the liquidation of a partnership.		Q12-12 Q12-13 Q12-14	Q12-15 E12-8 Q12-16 E12-9 BE12-6 E12-10 DI12-3 P12-3A DI12-4 P12-3B			
*6. Explain the effects of the entries when a new partner is admitted.		Q12-18 Q12-19	Q12-20 E12-12 Q12-21 E12-15 BE12-7 P12-4A BE12-8 P12-4B E12-11			
*7. Describe the effects of the entries when a partner withdraws from the firm.		Q12-23 Q12-24	Q12-22 E12-14 BE12-9 E12-15 BE12-10 P12-5A E12-13 P12-5B			
Broadening Your Perspective		Real-World Focus Decision Making Across the Organization			Communication All About You	Decision Making Across the Organization Ethics Case

ANSWERS TO QUESTIONS

1. (a) Association of individuals. A partnership is a voluntary association of two or more individuals based on as simple an act as a handshake. Preferably, however, the agreement should be in writing. A partnership is both a legal entity and an accounting entity, but it is not a taxable entity.
(b) Limited life. A partnership does not have unlimited life. A partnership may be ended voluntarily or involuntarily. Thus, the life of a partnership is indefinite. Any change in the members of a partnership results in the dissolution of the partnership.
(c) Co-ownership of property. Partnership assets are co-owned by all the partners. If the partnership is terminated, the assets do not legally revert to the original contributor. Each partner has a claim on total assets equal to his or her capital balance. This claim does not attach to specific assets the individual partner contributed to the firm.

2. (a) Mutual agency. This characteristic means that the act of any partner is binding on all other partners when engaging in partnership business. This is true even when the partners act beyond the scope of their authority, so long as the act appears to be appropriate for the partnership.
(b) Unlimited liability. Each partner is personally and individually liable for all partnership liabilities. Creditors' claims attach first to partnership assets and then to personal resources of any partner, irrespective of that partner's equity in the partnership.

3. The advantages of a partnership are: (1) combining skills and resources of two or more individuals, (2) ease of formation, (3) freedom from governmental regulations and restrictions, and (4) ease of decision making. Disadvantages are: (1) mutual agency, (2) limited life, and (3) unlimited liability.

4. A limited partnership is used when a general partner(s) wish to raise cash without involving outside investors in management of the business. Limited partners in this case have limited personal liability for business debts as long as they don't participate in management.

5. Newland capital account balance should be $97,000, comprised of land $60,000, and equipment $57,000, less debt $20,000.

6. When the partnership agreement does not specify the division of net income or net loss, net income and net loss should be divided equally.

7. Factors to be considered in determining how income and loss should be divided are: (1) a fixed ratio is easy to apply and it may be an equitable basis in some circumstances; (2) capital balance ratios, when the funds invested in the partnership are considered the most critical factor; and (3) salary allowance and/or interest allowance coupled with a fixed ratio. This last approach gives specific recognition to differences that may exist among partners by providing salary allowances for time worked and interest allowances for capital invested.

8. The net income of $42,000 should be divided equally—$21,000 to M. Elston and $21,000 to R. Ogle

9. (a) Account debited: Income Summary; accounts credited: S. Pletcher, Capital and F. Holt, Capital.
(b) Account debited: S. Pletcher, Drawings; account credited: Cash.

10. Division of Net Income

	T. Greer	R. Parks	Total
Salary Allowance	$30,000	$25,000	$55,000
Deficiency: ($15,000)			
($40,000 – $55,000)			
T. Greer (60% X $15,000)	(9,000)		(9,000)
R. Parks (40% X $15,000)		(6,000)	(6,000)
Total division	$21,000	$19,000	$40,000

11. The financial statements of a partnership are similar to those of a proprietorship. The differences are due to the number of partners involved. The income statement for a partnership is identical to the income statement for a proprietorship except for the detailed information concerning the division of net income. The owners' equity statement is called the partners' capital statement. This statement shows the changes in each partner's capital account and in total partnership capital during the year. On the balance sheet each partner's capital balance is reported in the owners' equity section.

12. Liquidation of a partnership ends both the legal and economic life of the entity. Partnership dissolution occurs whenever a partner withdraws or a new partner is admitted. Dissolution does not necessarily mean that the business ends. If the continuing partners agree, operations can continue without interruption by forming a new partnership.

13. No, Roger is not correct. All gains and losses on liquidation should be allocated to the partners on the basis of their income ratio. However, final cash distributions should be based on their capital balances.

14. Yes, Mike is correct. Capital balances are used because they represent the individual partner's equity in the partnership. The objective of the distribution is to eliminate the balance in each partner's capital account.

15.

Total cash after paying liabilities	$103,000
Total capital balances ($34,000 + $31,000 + $28,000)	93,000
Excess (gain on sale of noncash assets)	$ 10,000
Allocated to Madson ($10,000 X 3/10)	$ 3,000
Cash to Madson ($31,000 + $3,000)	$ 34,000

16.

Capital deficiency, M. Luthi	$ 4,000
Loss allocated to: L. Seastrom, capital ($4,000 X 3/8)	$ 1,500
Cash to L. Seastrom ($12,000 – $1,500)	$ 10,500

17. A partnership is an association of two or more persons to carry on as co-owners of a business for profit. Apple is a corporation since its has thousands of owners (called stockholders).

***18.** This transaction represents the purchase of an existing partner's interest. It is a personal transaction that has no effect on partnership net assets.

***19.** Partnership net assets increase $25,000. No, Jerry Park does not necessarily acquire a 1/6 income ratio. Unless stated otherwise, net income or net loss is divided evenly among all partners.

***20.**

Jamar, Capital	68,000	
Parsons, Capital		68,000

***21.**

Jaime Keller, Capital	41,000	
Sam Parmenter, Capital		41,000

***22.** Pester's share of the $4,000 bonus is computed as follows:

Partnership assets		$85,000
Capital credit, Riley		81,000
Bonus to retiring partner		4,000
Allocated to:		
Jaggard: $4,000 X 5/8 =	$2,500	
Pester: $4,000 X 3/8 =	1,500	4,000
		$ 0

***23.** Recording the revaluations violates the cost principle, which requires that assets be stated at original cost. It is also a departure from the going-concern assumption, which assumes the entity will continue indefinitely.

***24.** When a partner dies, it is usually necessary to determine the partner's equity at the date of death by: (1) determining the net income or loss for the year to date, (2) closing the books, and (3) preparing financial statements. The partnership agreement may also require an audit of the financial statements by independent auditors and a revaluation of assets by an appraisal firm.

SOLUTIONS TO BRIEF EXERCISES

BRIEF EXERCISE 12-1

Cash	10,000	
Equipment	4,000	
Fred Nichols, Capital		14,000

BRIEF EXERCISE 12-2

Accounts Receivable	$16,000	
Less: Allowance for doubtful accounts	1,500	$14,500
Equipment		11,000

Accumulated depreciation should not be shown because a new company cannot have any accumulated depreciation.

BRIEF EXERCISE 12-3

The division is: Rod $45,000 ($75,000 X 60%) and Dall $30,000 ($75,000 X 40%). The entry is:

Income Summary	75,000	
Rod, Capital		45,000
Dall, Capital		30,000

BRIEF EXERCISE 12-4

Division of Net Income

	Pitts	Filbert	Witten	Total
Salary allowance	$15,000	$ 5,000	$ 5,000	$25,000
Remaining income, $20,000: ($45,000 – $25,000)				
P ($20,000 X 50%)	10,000			
F ($20,000 X 30%)		6,000		
W ($20,000 X 20%)			4,000	
Total remainder				20,000
Total division of net income	$25,000	$11,000	$9,000	$45,000

BRIEF EXERCISE 12-5

Division of Net Income

	Nabb	Fry	Total
Salary allowance	$15,000	$10,000	$25,000
Interest allowance	7,000	5,000	12,000
Remaining deficiency, ($6,000):			
[$31,000 – ($25,000 + $12,000)]			
Nabb ($6,000 X 50%)	(3,000)		
Fry ($6,000 X 50%)		(3,000)	
Total remainder			(6,000)
Total division of net income	$19,000	$12,000	$31,000

BRIEF EXERCISE 12-6

A, Capital	8,000	
B, Capital	9,000	
C, Capital	4,000	
Cash		21,000

*BRIEF EXERCISE 12-7

Eubank, Capital	11,000	
Tovar, Capital		11,000

*BRIEF EXERCISE 12-8

Cash	58,000	
Irey, Capital (50% X $8,600*)	4,300	
Pedigo, Capital (50% X $8,600)	4,300	
Vernon, Capital (45% X $148,000)		66,600

*[($40,000 + $50,000 + $58,000) X 45%] – $58,000 = $8,600.

*BRIEF EXERCISE 12-9

Fernetti, Capital	20,000	
Lango, Capital		10,000
Oslo, Capital		10,000

*BRIEF EXERCISE 12-10

Fernetti, Capital	20,000	
Lango, Capital (50% X $4,000)	2,000	
Oslo, Capital (50% X $4,000)	2,000	
Cash		24,000

SOLUTIONS FOR DO IT! REVIEW EXERCISES

DO IT! 12-1

1. True.
2. False. If a partnership is dissolved, each partner has a claim on total assets equal to the balance in his or her capital account. The claim does not attach to any specific assets.
3. False. In a limited partnership, the general partners have unlimited liability.
4. True.
5. True.

DO IT! 12-2

The division of net income is as follows:

	Miley	Guthrie	Total
Salary allowance	$25,000	$18,000	$43,000
Remaining income ($75,000 – $43,000)			
Miley (40% X $32,000)	12,800		
Guthrie (60% X $32,000)		19,200	
Total remaining income			32,000
Total division of net income	$37,800	$37,200	$75,000

DO IT! 12-2 (Continued)

Income Summary	75,000	
Miley, Capital....................................		37,800
Guthrie, Capital.................................		37,200

DO IT! 12-3

Item	Cash	+	Noncash Assets	=	Liabilities	+	Cisneros, Capital	+	Gunselman, Capital	+	Forren, Capital
Balance before liquidation	15,000		90,000		40,000		20,000		32,000		13,000
Sale of noncash assets and allocation of gain	125,000		(90,000)				13,125[a]		8,750[b]		13,125[a]
New balances	140,000		–0–		40,000		33,125		40,750		26,125
Pay liabilities	(40,000)				(40,000)						
New balances	100,000		–0–		–0–		33,125		40,750		26,125
Cash distribution to partners	(100,000)						(33,125)		(40,750)		(26,125)
Final balances	–0–		–0–		–0–		–0–		–0–		–0–

[a]35,000 X 3/8
[b]35,000 X 2/8

DO IT! 12-4

Oakley, Capital ($14,000 X 3/7)	6,000	
Ellis, Capital ($14,000 X 4/7)..	8,000	
Quaney, Capital		14,000
(To record write-off of capital deficiency)		
Oakley, Capital ($47,000 – $6,000)....................................	41,000	
Ellis, Capital ($40,000 – $8,000)..	32,000	
Cash...		73,000
(To record distribution of cash of partners)		

SOLUTIONS TO EXERCISES

EXERCISE 12-1

1. False. A partnership is an association of *two* or more persons to carry on as co-owners of a business for profit.
2. False. Partnerships are fairly easy to form; they can be formed simply by a verbal agreement.
3. False. A partnership *is* an entity for financial reporting purposes.
4. False. The net income of a partnership is *not* taxed as a separate entity.
5. True.
6. True.
7. False. When a partnership is dissolved, the assets do *not* revert to the original contributor.
8. True.
9. False. Mutual agency is a *disadvantage* of the partnership form of business.

EXERCISE 12-2

(a)	Cash	50,000	
	Decker, Capital		50,000
	Land	15,000	
	Buildings	80,000	
	Rosen, Capital		95,000
	Cash	9,000	
	Accounts Receivable	32,000	
	Equipment	39,000	
	Allowance for Doubtful Accounts		3,000
	Toso, Capital		77,000

(b) $50,000 + $95,000 + $77,000 = <u>$222,000</u>

EXERCISE 12-3

Jan. 1	Cash	12,000	
	Accounts Receivable	14,000	
	Equipment	23,500	
	Allowance for Doubtful Accounts		3,000
	Suzy Vopat, Capital		46,500

EXERCISE 12-4

(a) (1)

DIVISION OF NET INCOME

	McGill	Smyth	Total
Salary allowance	$22,000	$13,000	$35,000
Interest allowance			
McGill ($50,000 X 10%)	5,000		
Smyth ($40,000 X 10%)		4,000	
Total interest			9,000
Total salaries and interest	27,000	17,000	44,000
Remaining income, $6,000 ($50,000 – $44,000)			
McGill ($6,000 X 60%)	3,600		
Smyth ($6,000 X 40%)		2,400	
Total remainder			6,000
Total division of net income	$30,600	$19,400	$50,000

(2)

DIVISION OF NET INCOME

	McGill	Smyth	Total
Salary allowance	$22,000	$13,000	$35,000
Interest allowance	5,000	4,000	9,000
Total salaries and interest	27,000	17,000	44,000
Remaining deficiency, ($8,000) ($36,000 – $44,000)			
McGill ($8,000 X 60%)	(4,800)		
Smyth ($8,000 X 40%)		(3,200)	
Total remainder			(8,000)
Total division of net income	$22,200	$13,800	$36,000

(b)	(1) Income Summary	50,000	
	McGill, Capital		30,600
	Smyth, Capital		19,400
	(2) Income Summary	36,000	
	McGill, Capital		22,200
	Smyth, Capital		13,800

EXERCISE 12-5

(a)	Income Summary	80,000	
	Coburn, Capital ($80,000 X 45%)		36,000
	Webb, Capital ($80,000 X 55%)		44,000
(b)	Income Summary	80,000	
	Coburn, Capital [$30,000 + ($25,000 X 45%)]		41,250
	Webb, Capital [$25,000 + ($25,000 X 55%)]		38,750
(c)	Income Summary	80,000	
	Coburn, Capital		41,000
	Webb, Capital		39,000

Coburn: [$40,000 + $6,000 – ($10,000 X 50%)]
Webb: [$35,000 + $9,000 – ($10,000 X 50%)]

(d) Coburn: $60,000 + $41,000 – $18,000 = $83,000
Webb: $90,000 + $39,000 – $24,000 = $105,000

EXERCISE 12-6

(a)

NATIONAL CO.
Partners' Capital Statement
For the Year Ended December 31, 2014

	N. Payne	A. Dody	Total
Capital, January 1	$20,000	$18,000	$38,000
Add: Net income	20,000	20,000	40,000
	40,000	38,000	78,000
Less: Drawings	8,000	5,000	13,000
Capital, December 31	$32,000	$33,000	$65,000

EXERCISE 12-6 (Continued)

(b)

NATIONAL CO.
Partial Balance Sheet
December 31, 2014

Owners' equity		
N. Payne, Capital	$32,000	
A. Dody, Capital	33,000	
Total owners' equity		$65,000

EXERCISE 12-7

THE DOCTOR PARTNERSHIP
Balance Sheet
December 31, 2014

Assets			
Current Assets			
Cash		$37,000	
Accounts Receivable	$36,000		
Less: Allowance for Doubtful Accounts	4,000	32,000	
Supplies		3,000	
Total current assets			$ 72,000
Property, Plant and Equipment			
Land		$28,000	
Buildings		75,000	
Equipment		52,000	
Total property, plant, and equipment			155,000
Total assets			$227,000
Liabilities and Owners' Equity			
Long-term Liabilities			
Mortgage Payable			$ 20,000
Owners' Equity			
Terry, Capital		$55,000	
Nick, Capital		83,000	
Frank, Capital		69,000	
Total owners' equity			207,000
Total liabilities and owners' equity			$227,000

EXERCISE 12-8

SEDGWICK COMPANY
Schedule of Cash Payments

Item	Cash	+	Noncash Assets	=	Liabilities	+	Floyd, Capital	+	DeWitt, Capital
Balances before liquidation	$ 20,000		$100,000		$55,000		$45,000		$20,000
Sale of noncash assets and allocation of gain	105,000		(100,000)				3,000		2,000
New balances	125,000		0		55,000		48,000		22,000
Pay liabilities	(55,000)				(55,000)				
New balances	70,000		0		0		48,000		22,000
Cash distribution to partners	(70,000)						(48,000)		(22,000)
Final balances	$ 0		$ 0		$ 0		$ 0		$ 0

EXERCISE 12-9

		Debit	Credit
(a)	Cash	105,000	
	Noncash Assets		100,000
	Gain on Realization		5,000
(b)	Gain on Realization	5,000	
	Floyd, Capital ($5,000 X 60%)		3,000
	DeWitt, Capital ($5,000 X 40%)		2,000
(c)	Liabilities	55,000	
	Cash		55,000
(d)	Floyd, Capital	48,000	
	DeWitt, Capital	22,000	
	Cash		70,000

EXERCISE 12-10

(a)	(1)	Cash	8,000	
		Pena, Capital		8,000
	(2)	Vogel, Capital	17,000	
		Utech, Capital	15,000	
		Cash		32,000
(b)	(1)	Vogel, Capital ($8,000 X 5/8)	5,000	
		Utech, Capital ($8,000 X 3/8)	3,000	
		Pena, Capital		8,000
	(2)	Vogel, Capital ($17,000 – $5,000)	12,000	
		Utech, Capital ($15,000 – $3,000)	12,000	
		Cash		24,000

*EXERCISE 12-11

(a)	K. Kolmer, Capital ($34,000 X 50%)	17,000	
	D. Jernigan, Capital		17,000
(b)	C. Eidman, Capital ($26,000 X 50%)	13,000	
	D. Jernigan, Capital		13,000
(c)	C. Ryno, Capital ($21,000 X 33 1/3%)	7,000	
	D. Jernigan, Capital		7,000

*EXERCISE 12-12

(a)	Cash	90,000	
	S. Pagon, Capital (6/10 X $15,000)		9,000
	T. Tabor, Capital (4/10 X $15,000)		6,000
	W. Wolford, Capital		75,000

Total capital of existing partnership	$160,000
Investment by new partner, Wolford	90,000
Total capital of new partnership	$250,000
Wolford's capital credit (30% X $250,000)	$ 75,000

***EXERCISE 12-12 (Continued)**

	Investment by new partner, Wolford	$ 90,000	
	Wolford's capital credit	75,000	
	Bonus to old partners	$ 15,000	

(b)	Cash	50,000	
	S. Pagan, Capital (6/10 X $13,000)	7,800	
	T. Tabor, Capital (4/10 X $13,000)	5,200	
	W. Wolford, Capital		63,000

Total capital of existing partnership	$160,000
Investment by new partner, Wolford	50,000
Total capital of new partnership	$210,000
Wolford's capital credit (30% X $210,000)	$ 63,000

Investment by new partner, Wolford	$ 50,000
Wolford's capital credit	63,000
Bonus to new partner	$ 13,000

***EXERCISE 12-13**

1.	C. Heganbart, Capital	30,000	
	N. Essex, Capital		15,000
	C. Gilmore, Capital		15,000
2.	C. Heganbart, Capital	30,000	
	C. Gilmore, Capital		30,000
3.	C. Heganbart, Capital	30,000	
	N. Essex, Capital		30,000

*EXERCISE 12-14

1.	N. Rice, Capital		60,000	
	B. Higgins, Capital		2,500	
	J. Mayo, Capital		1,500	
	Cash			64,000

Capital balance of withdrawing partner		$60,000
Payment to withdrawing partner		64,000
Bonus to retiring partner		$ 4,000
Allocation of bonus		
Higgins, Capital ($4,000 X 5/8)	$2,500	
Mayo, Capital ($4,000 X 3/8)	1,500	$ 4,000

2.	N. Rice, Capital		60,000	
	B. Higgins, Capital			5,000
	J. Mayo, Capital			3,000
	Cash			52,000

Capital balance of withdrawing partner		$60,000
Payment to withdrawing partner		52,000
Bonus to remaining partners		$ 8,000
Allocation of bonus		
Higgins, Capital ($8,000 X 5/8)	$5,000	
Mayo, Capital ($8,000 X 3/8)	3,000	$ 8,000

*EXERCISE 12-15

(a)	Cash	88,000	
	Garrett, Capital ($288,000[a] X 25%)		72,000
	Foss, Capital ($16,000 X 50%)		8,000
	Albertson, Capital ($16,000 X 30%)		4,800
	Espinosa, Capital ($16,000 X 20%)		3,200

[a]$100,000 + $60,000 + $40,000 + $88,000

(b)	Foss, Capital	100,000	
	Albertson, Capital ($10,000 X 3/5)	6,000	
	Espinosa, Capital ($10,000 X 2/5)	4,000	
	Cash		110,000

SOLUTIONS TO PROBLEMS

PROBLEM 12-1A

(a)	Jan. 1	Cash	14,000	
		Accounts Receivable	17,500	
		Inventory	28,000	
		Equipment	25,000	
		Allowance for Doubtful Accounts		4,500
		Notes Payable		18,000
		Accounts Payable		22,000
		Sorensen, Capital		40,000
	1	Cash	12,000	
		Accounts Receivable	26,000	
		Inventory	20,000	
		Equipment	15,000	
		Allowance for Doubtful Accounts		4,000
		Notes Payable		15,000
		Accounts Payable		31,000
		Lucas, Capital		23,000
(b)	Jan. 1	Cash	5,000	
		Sorensen, Capital		5,000
	1	Cash	19,000	
		Lucas, Capital		19,000

(c)

SOLU COMPANY
Balance Sheet
January 1, 2014

Assets

Current assets		
Cash		
($14,000 + $12,000 + $5,000 + $19,000)		$ 50,000
Accounts receivable		
($17,500 + $26,000)	$43,500	
Less: Allowance for doubtful accounts		
($4,500 + $4,000)	8,500	35,000
Inventory ($28,000 + $20,000)		48,000
Total current assets		133,000
Property, plant, and equipment		
Equipment ($25,000 + $15,000)		40,000
Total assets		$173,000

Liabilities and Owners' Equity

Current liabilities		
Notes payable ($18,000 + $15,000)		$ 33,000
Accounts payable ($22,000 + $31,000)		53,000
Total current liabilities		86,000
Owners' equity		
Sorensen, capital ($40,000 + $5,000)	$45,000	
Lucas, capital ($23,000 + $19,000)	42,000	
Total owners' equity		87,000
Total liabilities and owners' equity		$173,000

PROBLEM 12-2A

(a)	(1)	Income Summary	30,000	
		A. Niensted, Capital ($30,000 X 60%)		18,000
		G. Bolen, Capital ($30,000 X 30%)		9,000
		K. Sayler, Capital ($30,000 X 10%)		3,000
	(2)	Income Summary	40,000	
		A. Niensted, Capital ($15,000 + $5,000)		20,000
		G. Bolen, Capital ($10,000 + $5,000)		15,000
		K. Sayler, Capital ($0 + $5,000)		5,000

Net income	$40,000
Salary allowance	
Niensted	(15,000)
Bolen	(10,000)
Remainder	$15,000
To each partner	
($15,000 X 1/3)	$ 5,000

(3)	Income Summary	19,000	
	A. Niensted, Capital		
	($4,800 + $15,000 – $2,100)		17,700
	G. Bolen, Capital ($3,000 – $2,100)		900
	K. Sayler, Capital ($2,500 – $2,100)		400

Net income	$19,000
Interest allowance	
Niensted ($48,000 X 10%)	(4,800)
Bolen ($30,000 X 10%)	(3,000)
Sayler ($25,000 X 10%)	(2,500)
Balance	8,700
Salary allowance	
Niensted	(15,000)
Remainder	$ (6,300)
To each partner	
($6,300 X 1/3)	$ (2,100)

PROBLEM 12-2A (Continued)

(b) **DIVISION OF NET INCOME**

	Art Niensted	Greg Bolen	Krista Sayler	Total
Salary allowance	$15,000			$15,000
Interest allowance on capital				
A. Niensted ($48,000 X 10%)	4,800			
G. Bolen ($30,000 X 10%)		$3,000		
K. Sayler ($25,000 X 10%)			$2,500	
Total interest				10,300
Total salaries and interest	19,800	3,000	2,500	25,300
Remaining deficiency, ($6,300)				
A. Niensted ($6,300 X 1/3)	(2,100)			
G. Bolen ($6,300 X 1/3)		(2,100)		
K. Sayler ($6,300 X 1/3)			(2,100)	
Total remainder				(6,300)
Total division of net income	$17,700	$ 900	$ 400	$19,000

(c)

NBS COMPANY
Partners' Capital Statement
For the Year Ended December 31, 2014

	Art Niensted	Greg Bolen	Krista Sayler	Total
Capital, January 1	$48,000	$30,000	$25,000	$103,000
Add: Net income	17,700	900	400	19,000
	65,700	30,900	25,400	122,000
Less: Drawings	23,000	14,000	10,000	47,000
Capital, December 31	$42,700	$16,900	$15,400	$ 75,000

PROBLEM 12-3A

(a)

(1)

Cash	51,000	
Allowance for Doubtful Accounts	1,000	
Accumulated Depreciation—Equipment	5,500	
Loss on Realization	23,000	
Accounts Receivable		25,000
Inventory		34,500
Equipment		21,000

Noncash assets (net)	$74,000
Sale proceeds	51,000
Loss on sale of noncash assets	$23,000

(2)

A. Jamison, Capital ($23,000 X 5/10)	11,500	
S. Moyer, Capital ($23,000 X 3/10)	6,900	
P. Roper, Capital ($23,000 X 2/10)	4,600	
Loss on Realization		23,000

(3)

Notes Payable	13,500	
Accounts Payable	27,000	
Salaries and Wages Payable	4,000	
Cash		44,500

(4)

Cash	1,600	
P. Roper, Capital ($4,600 – $3,000)		1,600

(5)

A. Jamison, Capital ($33,000 – $11,500)	21,500	
S. Moyer, Capital ($21,000 – $6,900)	14,100	
Cash		35,600

PROBLEM 12-3A (Continued)

(b)

Cash

Bal.	27,500	(3)	44,500
(1)	51,000	(5)	35,600
(4)	1,600		
Bal.	–0–		

A. Jamision, Capital

(2)	11,500	Bal.	33,000
(5)	21,500		
		Bal.	–0–

S. Moyer, Capital

(2)	6,900	Bal.	21,000
(5)	14,100		
		Bal.	–0–

P. Roper, Capital

(2)	4,600	Bal.	3,000
		(4)	1,600
		Bal.	–0–

(c)

(1)	A. Jamison, Capital ($1,600 X 5/8)	1,000	
	S. Moyer, Capital ($1,600 X 3/8)	600	
	P. Roper, Capital		1,600
(2)	A. Jamison, Capital ($21,500 – $1,000)	20,500	
	S. Moyer, Capital ($14,100 – $600)	13,500	
	Cash ($35,600 – $1,600)		34,000

*PROBLEM 12-4A

(a)	(1)	J. Pinkston, Capital	9,000	
		J. Terrell, Capital		9,000
	(2)	C. Lamar, Capital	16,000	
		J. Terrell, Capital		16,000
	(3)	Cash	62,000	
		G. Donley, Capital (50% X $8,000)		4,000
		C. Lamar, Capital (40% X $8,000)		3,200
		J. Pinkston, Capital (10% X $8,000)		800
		J. Terrell, Capital		54,000

Total capital of existing partnership	$118,000
Investment by Terrell	62,000
Total capital of new partnership	$180,000
Terrell's capital credit ($180,000 X 30%)	$ 54,000
Investment by new partner, Terrell	$ 62,000
Terrell's capital credit	54,000
Bonus to old partners	$ 8,000

(4)	Cash	42,000	
	G. Donley, Capital ($6,000 X 50%)	3,000	
	C. Lamar, Capital ($6,000 X 40%)	2,400	
	J. Pinkston, Capital ($6,000 X 10%)	600	
	J. Terrell, Capital		48,000

Total capital of existing partnership	$118,000
Investment by Terrell	42,000
Total capital of new partnership	$160,000

*PROBLEM 12-4A (Continued)

Terrell's capital credit ($160,000 X 30%)	$48,000

Investment by new partner	$42,000
Terrell's capital credit	48,000
Bonus to new partner	$ 6,000

(b)	(1)	Total capital after admission ($32,000 ÷ 20%)	$160,000
		Total capital before admission	118,000
		Cash investment by Terrell	$ 42,000
	(2)	Decrease in Lamar's equity ($48,000 – $32,000)	$ 16,000
		Lamar's income ratio	40%
		Bonus to new partner ($16,000 ÷ 40%)	$ 40,000

*PROBLEM 12-5A

(a)	(1)	Posada, Capital	30,000	
		Trayer, Capital		15,000
		Emig, Capital		15,000
	(2)	Posada, Capital	30,000	
		Emig, Capital		30,000
	(3)	Posada, Capital	30,000	
		Trayer, Capital ($4,000 X 5/8)	2,500	
		Emig, Capital ($4,000 X 3/8)	1,500	
		Cash		34,000

Posada's capital balance	$30,000
Payment to Posada	34,000
Bonus to Posada	$ 4,000

	(4)	Posada, Capital	30,000	
		Trayer, Capital ($8,000 X 5/8)		5,000
		Emig, Capital ($8,000 X 3/8)		3,000
		Cash		22,000

Posada's capital balance	$30,000
Payment to Posada	22,000
Bonus to old partners	$ 8,000

(b)	(1)	Emig's capital after withdrawal	$43,600
		Emig's capital before withdrawal	40,000
		Bonus to Emig	3,600
		Emig's income ratio with Trayer	3/8
		Total bonus ($3,600 ÷ 3/8)	$ 9,600
	(2)	Posada's capital balance	$30,000
		Total bonus to other partners	(9,600)
		Cash paid to Posada	$20,400

PROBLEM 12-1B

(a)	Jan. 1	Cash	10,000	
		Accounts Receivable	18,000	
		Inventory	38,000	
		Equipment	35,000	
		Allowance for Doubtful Accounts		2,500
		Notes Payable		20,000
		Accounts Payable		30,000
		Utech, Capital		48,500
	1	Cash	8,000	
		Accounts Receivable	30,000	
		Inventory	25,000	
		Equipment	18,000	
		Allowance for Doubtful Accounts		4,000
		Accounts Payable		40,000
		Flott, Capital		37,000
(b)	Jan. 1	Cash	3,500	
		Utech, Capital		3,500
	1	Cash	16,000	
		Flott, Capital		16,000

PROBLEM 12-1B (Continued)

(c)

COMMANDER COMPANY
Balance Sheet
January 1, 2014

Assets		
Current assets		
Cash		
($10,000 + $8,000 + $3,500 + $16,000) ...		$ 37,500
Accounts receivable		
($18,000 + $30,000)	$48,000	
Less: Allowance for doubtful accounts		
($2,500 + $4,000)	6,500	41,500
Inventory		
($38,000 + $25,000)		63,000
Total current assets		142,000
Property, plant, and equipment		
Equipment ($35,000 + $18,000)		53,000
Total assets		$195,000
Liabilities and Owners' Equity		
Current liabilities		
Notes payable		$ 20,000
Accounts payable ($30,000 + $40,000)......		70,000
Total current liabilities		90,000
Owners' equity		
Utech, capital ($48,500 + $3,500)	$52,000	
Flott, capital ($37,000 + $16,000)	53,000	
Total owners' equity		105,000
Total liabilities and owners' equity		$195,000

PROBLEM 12-2B

(a)	(1) Income Summary	50,000	
	Riles, Capital ($50,000 X 50%)		25,000
	Kinder, Capital ($50,000 X 30%)		15,000
	Crifui, Capital ($50,000 X 20%)		10,000
	(2) Income Summary	43,000	
	Riles, Capital		
	($15,000 + $6,000)		21,000
	Kinder, Capital ($10,000 + $6,000)		16,000
	Crifui, Capital ($0 + $6,000)		6,000

Net income	$43,000
Salary allowances	
Riles	(15,000)
Kinder	(10,000)
Remainder	$18,000
To each partner	
($18,000 X 1/3)	$ 6,000

(3) Income Summary	34,000	
Riles, Capital		
($4,000 + $20,000 + $2,000)		26,000
Kinder, Capital ($2,500 + $2,000)		4,500
Crifui, Capital ($1,500 + $2,000)		3,500

Net income	$ 34,000
Interest allowance	
Riles	
($40,000 X 10%)	(4,000)
Kinder ($25,000 X 10%)	(2,500)
Crifui ($15,000 X 10%)	(1,500)
Balance	26,000
Salary allowance	
Riles	(20,000)
Remainder	$ 6,000
To each partner	
($6,000 X 1/3)	$ 2,000

(b) **DIVISION OF NET INCOME**

	Riles	Kinder	Crifui	Total
Salary allowance	$20,000			$20,000
Interest allowance on capital				
Riles				
($40,000 X 10%)	4,000			
Kinder				
($25,000 X 10%)		$2,500		
Crifui				
($15,000 X 10%)			$1,500	
Total interest				8,000
Total salaries and interest	24,000	2,500	1,500	28,000
Remaining income, $6,000				
Riles				
($6,000 X 1/3)	2,000			
Kinder				
($6,000 X 1/3)		2,000		
Crifui				
($6,000 X 1/3)			2,000	
Total remainder				6,000
Total division of net income	$26,000	$4,500	$3,500	$34,000

(c)

RKC COMPANY
Partners' Capital Statement
For the Year Ended December 31, 2014

	Riles	Kinder	Crifui	Total
Capital, January 1	$40,000	$25,000	$15,000	$80,000
Add: Net income	26,000	4,500	3,500	34,000
	66,000	29,500	18,500	114,000
Less: Drawings	15,000	10,000	5,000	30,000
Capital, December 31	$51,000	$19,500	$13,500	$84,000

PROBLEM 12-3B

(a)

NEWMAN COMPANY
Schedule of Cash Payments

Item	Cash	+	Noncash Assets	=	Liabilities	+	Mallory, Capital	+	Bosco, Capital	+	Renteria, Capital
Balances before liquidation	$30,000	+	$70,000	=	$52,500	+	$28,000	+	$13,650		$5,850
Sale of noncash assets and allocation of loss (1) + (2)	55,000	+	(70,000)	=			(7,500)	+	(4,500)		(3,000)
New balances	85,000	+	0	=	52,500	+	20,500	+	9,150		2,850
Pay liabilities (3)	(52,500)			=	(52,500)						
New balances	32,500	+	0	=	0	+	20,500	+	9,150		2,850
Cash distribution to partners (4)	(32,500)		0	=	0		(20,500)	+	(9,150)		(2,850)
Final balances	$ 0		$ 0		$ 0		$ 0		$ 0		$ 0

PROBLEM 12-3B (Continued)

(b)

(1)

Apr. 30	Cash	55,000	
	Allowance for Doubtful Accounts	2,000	
	Accumulated Depreciation	8,000	
	Loss on Realization	15,000	
	Accounts Receivable		25,000
	Inventory		35,000
	Equipment		20,000

Noncash assets (net)	$70,000
Sale proceeds	55,000
Loss on sale of noncash assets	$15,000

(2)

30	Mallory, Capital ($15,000 X 50%)	7,500	
	Bosco, Capital ($15,000 X 30%)	4,500	
	Renteria, Capital ($15,000 X 20%)	3,000	
	Loss on Realization		15,000

(3)

30	Notes Payable	20,000	
	Accounts Payable	30,000	
	Salaries and Wages Payable	2,500	
	Cash		52,500

(4)

30	Mallory, Capital ($28,000 – $7,500)	20,500	
	Bosco, Capital ($13,650 – $4,500)	9,150	
	Renteria, Capital ($5,850 – $3,000)	2,850	
	Cash		32,500

PROBLEM 12-3B (Continued)

(c)

Cash

Bal.	30,000	4/30 (3)	52,500
4/30 (1)	55,000	30 (4)	32,500
Bal.	–0–		

Bosco, Capital

4/30 (2)	4,500	Bal.	13,650
30 (4)	9,150		
		Bal.	–0–

Mallory, Capital

4/30 (2)	7,500	Bal.	28,000
30 (4)	20,500		
		Bal.	–0–

Renteria, Capital

4/30 (2)	3,000	Bal.	5,850
30 (4)	2,850		
		Bal.	–0–

*PROBLEM 12-4B

(a)	(1)	Giger, Capital	5,000	
		Edelman, Capital		5,000
	(2)	Beyer, Capital	8,000	
		Edelman, Capital		8,000
	(3)	Cash	29,000	
		Younger, Capital ($5,000 X 5/10)	2,500	
		Beyer, Capital ($5,000 X 3/10)	1,500	
		Giger, Capital ($5,000 X 2/10)	1,000	
		Edelman, Capital		34,000

Total capital of existing partnership	$56,000
Investment by Edelman	29,000
Total capital of new partnership	$85,000
Edelman capital credit ($85,000 X 40%)	$34,000
Investment by new partner, Edelman	$29,000
Edelman capital credit	34,000
Bonus to new partner	$ 5,000

(4)	Cash	24,000	
	Younger, Capital ($8,000 X 5/10)		4,000
	Beyer, Capital ($8,000 X 3/10)		2,400
	Giger, Capital ($8,000 X 2/10)		1,600
	Edelman, Capital		16,000

Total capital of existing partnership	$56,000
Investment by Edelman	24,000
Total capital of new partnership	$80,000

*PROBLEM 12-4B (Continued)

Edelman's capital credit ($80,000 X 20%)................	$16,000

Investment by new partner, Edelman	$24,000
Edelman's capital credit......	16,000
Bonus to old partners	$ 8,000

(b)	Total capital after admission ($25,000 ÷ 25%)	$100,000
	Total capital before admission	56,000
	(1) Cash investment by Edelman..	$ 44,000
	Increase in Beyer's equity ($25,000 – $16,000)	$ 9,000
	Beyer's income ratio..	3/10
	(2) Total bonus to old partners ($9,000 ÷ 3/10)..................	$ 30,000

*PROBLEM 12-5B

(a)

(1)	Piper, Capital	28,000	
	Dunlap, Capital		14,000
	Yevak, Capital		14,000
(2)	Piper, Capital	28,000	
	Yevak, Capital		28,000
(3)	Piper, Capital	28,000	
	Dunlap, Capital ($6,000 X 6/9)	4,000	
	Yevak, Capital ($6,000 X 3/9)	2,000	
	Cash		34,000

Piper's capital balance	$28,000
Payment to Piper	34,000
Bonus to Piper	$ 6,000

(4)	Piper, Capital	28,000	
	Dunlap, Capital ($9,000 X 6/9)		6,000
	Yevak, Capital ($9,000 X 3/9)		3,000
	Cash		19,000

Piper's capital balance	$28,000
Payment to Piper	19,000
Bonus to remaining partners	$ 9,000

(b)

(1)	Yevak capital after withdrawal	$57,000
	Yevak capital before withdrawal	51,000
	Bonus to Yevak	$ 6,000
	Yevak income ratio with Dunlap	3/9
	Total bonus ($6,000 ÷ 3/9)	$18,000
(2)	Piper capital balance	$28,000
	Total bonus to remaining partners	(18,000)
	Cash paid to Piper	$10,000

BYP 12-1 REAL-WORLD FOCUS

Students' answers will depend upon the firm selected and the timing of their exploration.

BYP 12-2 DECISION MAKING ACROSS THE ORGANIZATION

(a) The major disadvantages of a partnership are mutual agency, limited life, and unlimited liability. Mutual agency means that each partner acts on behalf of the partnership when engaging in partnership business. The act of any partner is binding on all other partners, even when the partners act beyond the scope of their authority, so long as the act appears to be appropriate for the partnership. A partnership does not have unlimited life. A partnership may be ended voluntarily or involuntarily. For the partnership discussed here, limited life does not appear to be a major drawback. Unlimited liability means that each partner is personally and individually liable for all partnership liabilities. Creditors' claims attach first to partnership assets, then to the personal resources of any partner, irrespective of that partner's capital equity in the company. This is a major limitation of a partnership.

(b) The written partnership agreement, often referred to as the articles of co-partnership, is needed. It should contain such basic information as the name and principal location of the firm, the purpose of the business, and date of inception. In addition, the following should be specified: (1) names and capital contributions of partners, (2) rights and duties of partners, (3) basis for sharing net income or net loss, (4) provision for withdrawals of assets, (5) procedures for submitting disputes to arbitration, (6) procedures for the withdrawal or addition of a partner, and (7) rights and duties of surviving partners in the event of a partner's death.

(c) The best approach would be to give Stephen an interest allowance for the additional investment. This approach would therefore permit each party to share equally in net income or net loss after the interest allowance.

(d) The computer equipment should be depreciated on the books of the partnership, not on Stephen's personal tax return. The computer is owned by the partnership, and only Stephen's share of net income should be reported on his tax return. The computer would be reported at its fair value when invested in the partnership, less the accumulated depreciation as of the end of the taxable year.

BYP 12-2 (Continued)

(e) To facilitate the payment from partnership assets of the deceased partner’s equity, some companies obtain life insurance policies on each partner with the partnership as the beneficiary. The proceeds from the insurance policy on the deceased partner are then used to settle the estate.

BYP 12-3	COMMUNICATION ACTIVITY

To: Ronald Hrabik
Meg percival

From: Your Accountant

Subject: Partnership Agreement for Pasta Shop

There are many important issues that should be included in your partnership agreement. Prior to our meeting next Tuesday, in my office, it would be helpful for you to consider the following matters.

1. Facts about the business; i.e., name, location, purpose, and date of inception.

2. Facts about the partners; i.e., the name and address of each partner, the beginning capital contribution of each partner, and the rights and duties of partners with respect to: (a) making business decisions, (b) active participation in the partnership (full/part-time), and (c) allowances for vacations and sick leave.

3. Basis for sharing net income or net loss. The Uniform Partnership Act specifies that the basis will be equal unless another basis is stated in the partnership agreement. The basis may include provisions for partnership salaries and interest on capital balances with the remainder being divided on a proportionate basis.

4. Provision for withdrawals of assets. There are two kinds of withdrawals: one is called drawings; the other is called a withdrawal of capital. The former relates to providing each partner with cash for normal living expenses. You may provide for periodic drawings of a fixed amount such as $1,000 a month, or an amount not to exceed a specified amount such as $1,500 or $2,000. Withdrawals of capital can affect the future of the partnership. Thus, you may want to provide for consultation with an attorney, a financial advisor, and/or a CPA and a formal approval procedure.

BYP 12-3 (Continued)

5. **Procedures for submitting disputes to arbitration. Inevitably, disagreements will occur between partners. The partnership contract should provide a framework for resolving them. You may want to include some or all of the outside parties mentioned above in an arbitration committee.**

6. **Procedures for the withdrawal or addition of a partner. At this time, consideration of this issue may seem premature. However, it is still useful to have basic procedures in place. For withdrawals, consideration should be given to both voluntary and "forced" withdrawals and the basis of determining and paying the capital equity of the partner who is leaving the firm. For additions, you may wish to state whether each admission must have the unanimous approval of existing partners and the terms of admission.**

7. **Rights and duties of surviving partners. The death of a partner is often a traumatic experience. Thus, it is advisable that the partnership agreement specify the responsibilities of the surviving partners, assuming the business is continued, or if the business is terminated. Also, procedures should be included for determining the deceased partner's equity in the firm. The procedures might include an audit of the financial statements and a revaluation of assets by an independent appraisal firm.**

I look forward to a productive session with both of you next Tuesday.

BYP 12-4 ETHICS CASE

(a) The stakeholders in this situation are Alexandra and Kellie.

(b) The consequences of Alexandra's actions are that they cause significant differences in the time worked between the partners and in the amount of drawings made by each partner. Sooner or later, Kellie is going to become annoyed with Alexandra's actions and this could cause friction between the partners.

The differences here emphasize the importance of a written partnership agreement. Time to be worked by each partner and allowable drawings are two subjects that should be in the agreement.

Based on the information given, ethical considerations rest primarily on the issue of fairness. Alexandra is not trying to hide anything from Kellie. However, her actions do not seem to be fair.

(c) For the differences in time worked, two changes in the partnership agreement should be considered. First, Kellie could be given a higher salary allowance than Alexandra. Second, because Kellie is contributing more to net income than Alexandra, she could be given a higher percentage of net income after deducting salary allowances.

For the differences in drawings, the partnership agreement could be altered to allow for interest on average monthly "net" partners' capitals. Net partners' capitals would be the difference between the balances of the capital and drawing accounts at the end of each month. If this is not agreeable to Alexandra, then the partnership agreement should be changed to limit the drawings of each partner to a fixed amount.

BYP 12-5 ALL ABOUT YOU

Given that the students may come up with variety of answers that are correct, there is no single correct solution to this problem. You may wish to have a show of hands on each question to see whether any consensus has developed on any of the questions.