Accrual vs Deferral

Accrual vs Cash Basis

- understanding debits and credits
  - a transaction either increases or decreases the balance of accounts.
  - increases and decreases in accounts are based on the convention of debits and credits.
  - *debit* means left side of accounts, and *credit* means right side of accounts.
  - the following is the accounting equation in T-account form and the rules for how debits and credits operate to reflect increases or decreases to various accounts.

Asset Accounts		=	Liability Accounts		+	Stockholders' Equity Accounts	
DR	CR		DR	CR		DR	CR
increase the account balance	decrease the account balance		decrease the account balance	increase the account balance		decrease the account balance	increase the account balance

  - the DR and CR rules treat revenue and expense accounts like stockholders' equity account.

Revenues (that is, SE increases)		Expenses (that is, SE decreases)	
DR	CR	DR	CR
decrease the account balance	increase the account balance	increase the account balance	decrease the account balance

  - for each transaction, the dollar total of the debits must equal the dollar total of the credits.

Example 1: cash-basis income determination

- on 1/1/1st year, SK sells a 3-year subscription to its quarterly magazine to 1,000 subscribers.
- on 1/1/1st year, SK receives the full subsription price of $240 (12 issues × $20 per issue) from each of the subscribers ($240 × 1,000 = $240,000).
- on 1/1/1st year, SK borrows $100,000 (interest rate: 10%).
- total interest of $30,000 is payable on 12/31/3rd year.
- the cost of publishing and distributing the magazine amounts to $20,000 each year, which is paid in cash at the time of publication.

- cash-basis entries for 1st year

Cash	240,000	
Subsriptions revenue		240,000

Cash	100,000	
LT notes payable		100,000

Publishing expense	20,000	
Cash		20,000

· cash-basis entries for 2nd year

Publishing expense	20,000	
Cash		20,000

· cash-basis entries for 3rd year

Publishing expense	20,000	
Cash		20,000

Interest expense	30,000	
Cash		30,000

LT notes payable	100,000	
Cash		100,000

cash-basis income determination

	1st year	2nd year	3rd year
cash inflows	$240,000	$0	$0
cash outflows for publication	(20,000)	(20,000)	(20,000)
cash outflows for interest	______	______	(30,000)
net income (loss)	$220,000	$(20,000)	$(50,000)

· cash-basis accounting distorts SK's operating performance on a year-by-year basis.
· recognizing cash inflows as revenue and cash outflows as expenses result in cash basis income that fails to properly match accomplishment and effort.
· none of the annual cash-basis profit figures provide a reliable benchmark for predicting future operating results.

· accrual-basis income determination alleviates the mismatching problems that exist under cash-basis accounting.
· *accrual-basis accounting* allocates subscription revenue to each of the years as

the magazine is delivered to the subscriber and the revenues are "earned."

· likewise, accrual accounting recognizes interest expense in each year the bank loan is outstanding, not just when the interest is paid.

· these modifications to the cash-basis results are made via a series of adjusting entries.

· accrual basis accounting requires the reporting of revenues when earned and expenses when incurred, regardless of timing of cash receipts and cash payments.

· accrual accounting better matches economic benefit with economic effort, thereby producing a measure of operating performance that provides a more realistic picture of past economic activities.

- principles of accrual accounting

· revenue is normally recognized when earned regardless of when cash is actually received.

· if cash is collected before goods or services are delivered, revenue has not yet been earned. Therefore, revenue is deferred, and a liability account (not a revenue account) is used.

· *deferrals of revenue* occur because cash came in before the earnings process was completed.

· if goods or services are delivered and cash is not collected, the earnings are accrued before cash is actually collected. Therefore, the asset results from a revenue accrual and an asset account (a receivable) is used.

· *accruals of revenue* occur when the earnings process has been completed before the cash has been received.

· matching principle requires that costs incurred to generate revenues must be recognized in the same period.

· a matching of costs with benefits is required regardless of when cash is actually paid.

· expenses are resources "used up" to generate revenues.

· when cash is paid for assets or services before they are used up, an expense is deferred since it will be used in the future.

· therefore, an asset account is established.

· *deferrals of expenses* occur because cash has been spent but the acquired assets are not yet used.

· if employees provide services or goods are received from suppliers and payment has not yet been made, the expense has been accrued before cash is actually spent.

· since the cash payment will occur in the future, a liability results from an expense accrual.

· *accruals of expenses* occur because goods or services have been provided to

the company but they have not yet been paid.

- *Timing difference* and *adjusting entries*
  - there is a timing difference between when cash is received and when revenue is earned (accrual vs. cash basis accounting).
  - there is a timing differences between when cash is paid and expenses incurred.
  - the solution to the problem created by timing differences is solved by adjusting entries. Adjusting entries are prepared at the end of an accounting period so that:
    - revenues are recorded when earned (revenue principle)
    - expenses are recorded when incurred to generate revenue (matching principle)
    - assets are reported at amounts that represent the probable future benefit remaining at the end of the period
    - liabilities are reported at amounts that represent the probable future sacrifices of assets or services owed at the end of the period.
  - adjusting entries are required at the end of an accounting period.

- end-of-period adjusting entries for accruals:
  - when revenues are earned, cash has not been received, and nothing has been recorded, an adjusting entry must be prepared to properly reflect earned revenue.
  - when expenses are incurred (but unrecorded) and the cash payment to creditors (suppliers, employees, etc.) occurs after the end of the accounting period, an adjusting entry is needed to properly reflect those incurred but unpaid amounts.

- end-of-period adjusting entries for deferrals:
  - if the cash was received before the revenue was recognized, this transaction created a liability for unearned revenues. An adjusting entry is needed to properly record the amount of revenue earned by the end of the accounting period.
  - if cash was paid before the expense was recognized, this transaction created an asset, such as prepaid expenses. An adjusting entry is needed to properly record the amount of expense incurred by the end of the accounting period.

- the modification to the cash-basis results to obtain accrual earnings are accomplished by means of a series of "deferral" and "accrual" adjusting entries.
- there are four *types of adjusting entries.*
- *adjustments for prepayments* are required because of the passage of time.
- examples include prepaid rent, prepaid insurance, and depreciation or amortization of long-term assets.

· entries of this type:

Expense	XXX	
Asset (or contra-asset)		XXX

· *adjustments for unearned revenue* recognize that amounts paid in advance have been earned. Entries of this type:

Liability	XXX	
Revenue		XXX

· *adjustments for accrued expenses* recognize that expenses are incurred when the underlying economic event occurs, not necessarily when the cash flows out. Entries of this type:

Expense	XXX	
Liability		XXX

· *adjustments for accrued revenue* recognize that revenue is earned when the services have been performed or when goods are exchanged, not necessarily when cash is received. Entries of this type:

Asset	XXX	
Revenue		XXX

Example 2: adjustments for prepayments

· on 12/1/1st year, an insurance policy for one year is acquired for $1,200.

· on 12/31/1st year, one month's coverage has elapsed.

initial transaction			adjusting entry		
Prepaid insurance	1,200		Insurance expense	100	
Cash		1,200	Prepaid insurance		100

· on 12/1/1st year, a building is acquired for $50,000.

· building depreciation for December amounts to $300.

Building	50,000		Depreciation	300	
Cash		50,000	Accumulated depreciation		300

Example 3: adjustments for unearned revenues

· a $15,000 fee is received in advance from a law firm to help the firm design it's new office space.

· the consulting/design services are to be provided over the next several months.

· by the end of December, 20% of the design work has been completed.

Cash 15,000
    Fee received in advance 15,000

Fee received in advance 3,000
    Consulting fees revenue 3,000

Example 4: adjustments for accrued expenses
- salaries and wages for the month of December totals $28,000.
- the paycheck will not be issued to employees until January 4.

Salaries and wages expense 28,000
    Salaries and wages payable 28,000

- the utility bill for December totaling $1,300 arrives on December 30 but will not be paid until January 10 (due date).

Heat and power expense 1,300
    Accounts payable 1,300

Example 5: adjustments for accrued revenues
- on 12/31/1st year, an outside customer is billed for $2,500 for the consulting services provided during December.

Accounts receivable 2,500
    Consulting fee revenue 2,500

Example 6: accrued-basis income determination
- assume the same information as in Example 1.
- compute the accrual-basis revenues and expenses for each year.

- adjusting entries on 12/31/1st year.

Subscriptions revenue 160,000
    Deferred subscriptions revenue 160,000

Interest expense 10,000
    Accrued interest payable 10,000

- adjusting entries on 12/31/2nd year

Deferred subscriptions revenue 80,000
    Subscriptions revenue 80,000

Interest expense 10,000

Accrued interest payable 10,000

· adjusting entries on 12/31/3rd year

Deferred subscriptions revenue	80,000	
Subscriptions revenue		80,000
Interest expense	10,000	
Accrued interest payable		10,000

accrual-basis income determination

	1st year	2nd year	3rd year
cash received	$240,000		
deferred to future years	(160,000)		
revenues recognized as earned	80,000	$80,000	$80,000
publication expense	(20,000)	(20,000)	(20,000)
interest paid in cash			(30,000)
interest accrued	(10,000)	(10,000)	20,000
net income-accrual basis	$50,000	$50,000	$50,000

Example 7: accrual to cash basis (AICPA adapted)

In its accrual-basis income statement for the year ended December 31, 2008, Dart reported revenue of $1,750,000. Other information is:

Accounts receivable 12/31/7	$375,000
Uncollectible accounts written off during 2008	20,000
Accounts receivable 12/31/8	505,000

Under the cash basis of income determination, how much should Dart report as revenue for 2008?

Accounts receivable

1/1/8	375,000	uncollectible	20,000
sales	1,750,000	collected ??	1,600,000
12/31/8	505,000		

Example 8: accrual to cash basis (AICPA adapted)

Under Hart's accounting system, all insurance premiums paid are debited to Prepaid insurance. For interim financial reports, Hart makes monthly estimated charges to Insurance expense with credits to Prepaid insurance. Additional information for the year ended December 31, 2008 follows:

Prepaid insurance at December 31, 2007	$210,000
Charges to insurance expense during 2008, including a year-end adjustment of $35,000	875,000
Unexpired insurance premiums at December 31, 2008	245,000

What was the total amount of insurance premiums Hart paid during 2008?

Prepaid insuracne			
1/1/8	210,000	expense	
			875,000
??	910,000		
12/31/8	245,000		

Example 9: accrued liability (AICPA adapted)

Dix operates a retail store and must determine the proper December 31, 2008, year-end accrual for the following expenses:

· the store lease calls for fixed rent payments of $1,200 per month, payable at the beginning of the month, and additioanl rent equal to 6% of net sales over $250,000 per calendar year, payable on January 31, of the following year. Net sales for 2008 are $450,000.

· an electric bill of $850 covering the period December 16, 2008 through January 15, 2009 was received January 22, 2009.

· a $400 telephone bill was received January 7, 2009 covering:

Service in advance for January 2009	$150
Local and toll calls for December 2008	250

What amount should Dix report as accrued liabilities on its December 31, 2008 balance sheet?

accrued rent payable ($450,000-$250,000)×6%	$12,000
accrued electric bill obligation ($850×50%)	425
accrued telephone bill obligation	250
total accrued liability	$12,675

Simulation problem 1: cash to accrual basis (pp. 65-67) (AICPA adapted)

The following information pertains to Baron, a calendar-year sole proprietorship, which maintained its books on the cash basis during the year.

Trial balance December 31, 2008

	DR	CR
cash	$25,600	
accounts receivable 12/31/7	16,200	

inventory 12/31/7	62,000	
furniture and fixtures	118,200	
land improvements	45,000	
accumulated depreciation 12/31/7		$32,400
accounts payable 12/31/7		17,000
Baron, drawings		0
Baron, capital 12/31/7		124,600
sales		653,600
purchases	305,100	
salaries	174,000	
payroll taxes	12,400	
insurance	8,700	
rent	34,200	
utilities	12,600	
living expenses	13,000	
	$827,000	$827,000

The "Baron, drawings" account is used to record any distributions to Baron.
The "Baron, capital" account is used to record any capital contributions that Baron makes to the business and any profits or losses retained in the business.

Baron has developed plans to expand into the wholesale flower market and is in the process of negotiating a blank loan to finance the expansion. The bank is requesting 2008 financial statements prepared on the accrual basis of accounting from Baron.

During the course of a review engagement, Baron's accountant obtained the following additional information:

1. Amounts due from customers totaled $32,000 at Decemebr 31, 2008.
2. An analysis of the receivables revealed that an allowance for uncollectible accounts for $3,800 should be provided.
3. Unpaid invoices for flower purchases totaled $30,500 and $17,000 at December 31, 2008, and December 31, 2007, respectively.
4. A physical count of the goods at December 31, 2008 determined that the inventory totaled $72,800. The inventory was priced at cost, which approximates market value.
5. On May 1, 2008, Baron paid $8,700 to renew its comprehensive insurance coverage for one year. The premium on the previous policy, which expired on April 30, 2008, was $7,800.
6. On January 2, 2008, Baron entered into a 25-year operating lease for the vacant lot adjacent to his retail store, which was to be used as a parking lot. As

agreed to in the lease, Baron paved and fenced in the lot at a cost of $45,000. The improvements were completed on April 1, 2008, and have an estimated useful life of 15 years. No provision for depreciation or amortization has been recorded. Depreciation on furniture and fixtures was $12,000 for 2008.

7. Accrued expenses at December 31, 2007 and 2008 follows:

	2007	2008
utilities	$900	$1,500
payroll taxes	1,100	1,600
	$2,000	$3,100

8. Baron was notified late in the year of a lawsuit filed against his business for an injury to a customer. His attorney believes that the unfavorable outcome is probable and that a reasonable estimate of the settlement exclusive of amounts covered by insurance is $50,000.
9. The Salaries account includes $4,000 per month paid to the proprietor. He also receives $250 per week for living expenses. These amounts should have been charged to Baron's drawing account.

Determine the adjustments required to convert Baron's trial balance to the accrual basis of accounting for the year ended December 31, 2008. Prepare formal journal entries to support your adjustments.

Accounts receivable	
16,200	
?? 15,800	
32,000	

	Debit	Credit
Accounts	15,800	
Sales		15,800
Bad debt expense	3,800	
Allowance for bad debt		3,800

Accounts payable	
	17,000
	?? 13,500
	30,500

	Debit	Credit
Purchases	13,500	
Accounts payable		13,500

Inventory	
60,000	
?? 10,800	
72,800	

	Debit	Credit
Inventory	10,800	
Cost of goods sold		10,800

Prepaid insurance	
8,700	
5,800	
2,900*	

	Debit	Credit
Prepaid insurance	2,900	
Insurance expense		2,900
Insurance expense	2,600*	

* $8,700×4/12=$2,900

Baron, Capital 2,600

* $7,800×4/12=$2,600

Land improvements

Dr.	Cr.
45,200	
45,000	
90,200	

Depreciation (LI) 2,250*
Depreciation (F&F) 12,000
    Accumulated depr. 14,250

* $45,000÷15 years×9/12=$2,250

Utilities payable

Dr.	Cr.
	900
	?? 600
	1,500

Payroll taxes payable

Dr.	Cr.
	1,100
	?? 500
	1,600

Utilities expense 600
Payroll taxes 500
Baron, capital 2,000
    Utilities payable 1,500
    Paroll taxes payable 1,600

Contingent liability

Dr.	Cr.
	50,000
	50,000

Loss from pending litigation 50,000
    Utilities 50,000

Baron, drawings 61,000
    Salaries 48,000
    Living expenses 13,000

	cash basis		adjustments		accrual basis	
	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
Cash	$25,600				$25,600	
Accounts receivable	16,200		$15,800		32,000	
Inventory	62,000		10,000		72,800	
Furniture and fixtures	118,200				118,200	
Land improvements	45,000				45,000	
Accumulated depreciation and amortization		$32,400		$14,250		$46,650
Accounts payable		17,000		13,500		30,500
Baron, drawings			61,000		61,000	
Baron, capital		124,600	2,000	2,600		125,200
Allowance for uncollectibles				3,800		3,800
Prepaid insurance			2,900		2,900	
Contingent liability				50,000		50,000
Utilities payable				1,500		1,500
Payroll taxes payable				1,600		1,600
Sales		653,000		15,800		668,800
Purchases	305,100		13,500		318,600	
Salaries	174,000			48,000	126,000	

Payroll taxes	12,000		500		12,900	
Insurance expense	8,700		2,600	2,900	8,400	
Rent expense	34,200				34,000	
Utilities expense	12,600		600		13,200	
Living expense	13,000			13,000		
Bad debt expense			3,800		3,800	
Amortization and land improvement			2,250		2,250	
Depreciation expense			12,000		12,000	
Loss pending litigation			50,000		50,000	
Cost of goods sold				10,900		10,800
	$827,000	$827,000	$177,750	$177,750	$938,850	$938,850