

Chapter 6 Revenue Recognition

QUESTIONS FOR REVIEW OF KEY TOPICS

Question 6–1

The five key steps in applying the core revenue recognition principle are:

1. Identify the contract with a customer.
2. Identify the performance obligation(s) in the contract.
3. Determine the transaction price.
4. Allocate the transaction price to the performance obligations.
5. Recognize revenue when (or as) each performance obligation is satisfied.

Question 6–2

A performance obligation is satisfied at a single point in time when control is transferred to the buyer at a single point in time. This often occurs at delivery. Five key indicators are used to decide whether control of a good or service has passed from the seller to the buyer. The customer is more likely to control a good or service if the customer has:

1. An obligation to pay the seller.
2. Legal title to the asset.
3. Physical possession of the asset.
4. Assumed the risks and rewards of ownership.
5. Accepted the asset.

Management should evaluate these indicators individually and in combination to decide whether control has been transferred.

Question 6–3

A performance obligation is satisfied over time if at least one of the following three criteria is met:

1. The customer consumes the benefit of the seller's work as it is performed,
2. The customer controls the asset as it is created, or
3. The seller is creating an asset that has no alternative use to the seller, and the seller can receive payment for its progress even if the customer cancels the contract.

Answers to Questions (continued)

Question 6–4

Services typically qualify for revenue recognition over time because the customer consumes the benefit of the seller's work as it is performed. However, for convenience, even if the service qualifies for recognition of revenue over time, the seller might wait to recognize revenue until the service has been completed because it is more convenient to account for it that way. For example, if a service is delivered over days or even weeks, the seller might just wait to recognize revenue until delivery is complete rather than bothering with a more precise recognition of revenue over time. This departure from GAAP is appropriate only if the amount of revenue recognized under the departure is not materially different from the amount of revenue that would be recognized if revenue was recognized over time.

Question 6–5

Sellers account for a promise to provide a good or service as a performance obligation if the good or service is distinct from other goods and services in the contract. The idea is to separate contracts into parts that can be viewed on a stand-alone basis. That way the financial statements can better reflect the timing of the transfer of separate goods and services and the profit earned on each one. Performance obligations that are not distinct are combined and treated as a single performance obligation.

A performance obligation is distinct if it is both:

1. *Capable of being distinct.* The customer could use the good or service on its own or in combination with other goods and services it could obtain elsewhere, and
2. *Separately identifiable from other goods or services in the contract.* The good or service is not highly interrelated with other goods and services in the contract.

Answers to Questions (continued)

Question 6–6

If an arrangement has multiple performance obligations, the seller allocates the transaction price in proportion to the stand-alone selling prices of the goods or services underlying those performance obligations. If the seller can't observe actual stand-alone selling prices, the seller should estimate them.

Question 6–7

A contract specifies the legal rights and obligations of the seller and the customer. For a contract to exist for purposes of revenue recognition, it must:

1. Have commercial substance, affecting the risk, timing or amount of the seller's future cash flows,
2. Be approved by both the seller and the customer, indicating commitment to fulfilling their obligations,
3. Specify the seller and customer's rights regarding the goods or services to be transferred, and
4. Specify payment terms.
5. Be probable that the seller will collect the amount it is entitled to receive.

We normally think of a contract as being specified in a written document, but contracts can be oral rather than written. Contracts also can be implicit based on the typical business practices that a company follows. The key is that, implicitly or explicitly, the arrangement be substantive and specify the legal rights and obligations of a seller and a customer.

Question 6–8

Under U.S. GAAP, “probable” is defined as “likely to occur” or as “reasonably be expected or believed on the basis of available evidence or logic but is neither certain nor proved,” which implies a relatively high likelihood of occurrence. Under IFRS “probable” is defined as a likelihood that is greater than 50%, which is lower than the definition in U.S. GAAP. Therefore, some contracts might not meet this threshold under U.S. GAAP that do meet it under IFRS.

Answers to Questions (continued)

Question 6–9

If a seller grants a customer the option to acquire additional goods or services, that option gives rise to a performance obligation only if the option provides a material right to the customer that the customer would not receive without entering into the contract. If the option provides a material right, the customer in effect pays the seller in advance for future goods or services, and the seller recognizes revenue when those future goods or services are transferred or when the option expires.

Question 6–10

Variable consideration is included in the contract's transaction price when the seller believes it is probable that it won't have to reverse (adjust downward) a significant amount of revenue in the future because of a change in that variable consideration. The seller estimates the variable consideration as either the expected value or the most likely amount to be received, and includes that amount in the contract's transaction price.

Question 6–11

A seller is constrained to recognize only the amount of revenue for which the seller believes it is probable that a significant amount of revenue won't have to be reversed (adjusted downward) in the future because of a change in that variable consideration. Indicators that variable consideration should be constrained include limited other evidence on which to base an estimate, dependence of the variable consideration on factors outside the seller's control, and a long delay between when the estimate must be made and when the uncertainty is resolved.

Answers to Questions (continued)

Question 6–12

A right to return merchandise is not a performance obligation. Rather, it represents a potential failure to satisfy the original performance obligation. We view a right of return as a particular type of variable consideration. A seller usually can estimate the returns that will result for a given volume of sales based on past experience. Accordingly, the seller usually recognizes revenue upon delivery, but then reduces revenue by the estimated returns. The seller reports net sales revenue in the income statement, and also reports a refund liability in the balance sheet for any additional amounts it expects to refund to customers who make returns.

However, if the seller lacks sufficient information to be able to accurately estimate returns, the constraint on variable consideration applies, and the seller should recognize revenue only to the extent it is probable that a significant revenue reversal will not occur later if the estimate of returns changes. The seller might instead postpone recognizing any revenue until the uncertainty about returns is resolved.

Question 6–13

A principal has primary responsibility for delivering a product or service and obtains *control* of the goods or services before they are transferred to the customer. A principal recognizes as revenue the amount received from a customer. An agent doesn't primarily deliver goods or services, but acts as a facilitator that earns a commission for helping sellers to transact with buyers, and recognizes as revenue only the *commission* it receives for facilitating the sale.

Answers to Questions (continued)

Question 6–14

In general, the “time value of money” refers to the fact that money to be received in the future is less valuable than the same amount of money received now. If you have the money now, you can invest it to earn a return so the money can grow to a larger amount in the future.

If payment occurs either before or after delivery, conceptually the arrangement includes a financing component. Prepayments include an element of interest expense (the seller is borrowing from the buyer between payment and delivery), while receivables include an element of interest revenue (the buyer is borrowing from the seller between payment and delivery). When delivery and payment occur relatively near each other, the financing component is not significant and can be ignored. As a practical matter, sellers can assume the financing component is not significant if the period between delivery and payment is less than a year.

Answers to Questions (continued)

Question 6–15

If a seller purchases distinct goods or services from their customer and pays more than fair value for those goods or services, the excess payments are viewed as a refund of part of the price of the goods and services that the customer purchased from the seller. The excess payments are subtracted from the amount the seller is entitled to receive from the customer when calculating the transaction price of the sale to the customer.

Question 6–16

1. **Adjusted market assessment approach:** Under this approach, the seller estimates what it could sell the product or services for in the market in which it normally sells products. The seller likely would consider prices charged by competitors for similar products.
2. **Expected cost plus margin approach:** Under this approach, the seller estimates its costs of satisfying the performance obligation and then adds an appropriate profit margin to determine the revenue it would anticipate receiving for satisfying the performance obligation.
3. **Residual approach:** Under this approach, the seller subtracts from the total transaction price the sum of the known or estimated stand-alone selling prices of the other performance obligations that are included in the contract to arrive at an estimate of an unknown or highly uncertain stand-alone selling price.

Answers to Questions (continued)

Question 6–17

For licenses of symbolic intellectual property (IP), like trademarks, logos, brand names and franchise rights, sellers recognize revenue *over time*, because the license provides the customer with the right of access to the seller's IP with the understanding that the seller will undertake ongoing activities during the license period that benefit the customer.

For licenses of functional IP, sellers typically recognize revenue at the *point in time* that the customer can first use the IP. Functional IP has significant standalone functionality that is not affected by the seller's ongoing activity. Examples include software, drug formulas, and media content.

However, even for functional IP, sometimes sellers have to recognize revenue over time, because the seller is expected to change the functionality over the license period and the customer is required to use the updated version. In that case, even though the license involves functional IP, we view the license as transferring a right of access, and revenue must be recognized over the license period.

Question 6–18

In franchise arrangements, the franchisor typically has multiple performance obligations. The franchisor grants to the franchisee a right to sell the franchisor's products and services and use its name for a specified period of time. The franchisor also usually provides initial start-up services (such as identifying locations, remodeling or constructing facilities, and selling equipment and training to the franchisee). The franchisor also may provide ongoing products and services (such as franchise-branded products and advertising and administrative services). So, a franchise involves a license to use the franchisor's intellectual property, but also involves initial sales of products and services as well as ongoing sales of products and services.

Answers to Questions (continued)

Question 6–19

A **bill-and-hold** arrangement exists when a customer purchases goods but requests that the seller retain physical possession until a later date. The key indicator of whether control has passed from the seller to the customer for bill-and-hold arrangements is whether the customer has control of the asset. Since the customer doesn't have physical possession of the goods in a bill-and-hold arrangement, the customer isn't normally viewed as controlling the goods. However, if the customer goods are specifically identified as the customer's, and are ready for physical transfer, and the seller can't use the goods or sell them to another customer, then revenue would be recognized despite the customer not having taken physical possession of the goods.

Question 6–20

Under U.S. GAAP, intellectual property (IP) is categorized as either functional or symbolic, and symbolic IP is viewed as providing an access right that requires revenue recognition over time. IFRS does not require revenue recognition over time for symbolic IP if the seller is not affecting the usefulness of the IP to the customer during the license period.

Question 6–21

Sometimes a company arranges for another company to sell its product under consignment. The "consignor" physically transfers the goods to the other company (the consignee), but the consignor retains legal title. If the consignee can't find a buyer within an agreed-upon time, the consignee returns the goods to the consignor. However, if a buyer is found, the consignee remits the selling price (less commission and approved expenses) to the consignor.

Because the consignor retains the risks and rewards of ownership of the product and title does not pass to the consignee, the consignor does not record revenue (and related costs) until the consignee sells the goods and title passes to the eventual customer.

Answers to Questions (continued)

Question 6–22

Sometimes companies receive non-refundable prepayments from customers for some future good or service. That is what occurs when a company sells a gift card. The seller does not recognize revenue at the time the gift card is sold to the customer. Instead, the seller records a deferred revenue liability in anticipation of recording revenue when the gift card is redeemed. If the gift card isn't redeemed, the seller recognizes revenue when it expires or when, based on past experience, the seller has concluded that customers will not redeem it.

Question 6–23

Bad debt expense must be reported clearly either on its own line in the income statement or in the notes to the financial statements.

Question 6–24

If the customer makes payment to the seller before the seller has satisfied performance obligations, the seller records a contract liability. If the seller satisfies a performance obligation before the customer has paid for it, the seller records either a contract asset or a receivable. The seller recognizes an accounts receivable if the seller has an unconditional right to receive payment, which is the case if only the passage of time is required before the payment is due. If instead the seller satisfies a performance obligation but its right to payment depends on something other than the passage of time (for example, the seller satisfying other performance obligations), the seller recognizes a contract asset.

Question 6–25

If a long-term contract qualifies for revenue recognition over time, the seller recognizes a portion of the project's expected revenues and costs to each period in which construction occurs, according to the percentage of the project completed to date. If the contract does not qualify for revenue recognition over time, the seller recognizes revenue and costs when the project is complete.

Question 6–26

The billings on construction contract account is a contra account to the construction in progress asset. At the end of each reporting period, the balances in these two accounts are compared. If the net amount is a debit, it is reported in the balance sheet as a contract asset. Conversely, if the net amount is a credit, it is reported as a contract liability.

Answers to Questions (continued)

Question 6–27

An estimated loss on a long-term contract must be fully recognized in the first period the loss becomes evident, regardless of the revenue recognition method used.

BRIEF EXERCISES

Brief Exercise 6–1

In 2024 Apache has transferred the land, and the construction company has an obligation to pay Apache. Apache's performance obligation has been satisfied, and revenue and a related account receivable of \$3,000,000 can be recognized.

Under accrual accounting, revenue is recorded when goods or services are transferred to customers (2024), not necessarily when cash changes hands in future periods.

Brief Exercise 6–2

A performance obligation is satisfied over time if *at least one* of the following three criteria is met:

1. The customer consumes the benefit of the seller's work as it is performed,
2. The customer controls the asset as it is created, or
3. The seller is creating an asset that has no alternative use to the seller, and the seller can receive payment for its progress even if the customer cancels the contract.

Under Estate's construction agreement with CyberB, if for any reason Estate can't complete construction, CyberB would own the partially completed building. Therefore, criterion 2 is satisfied, and revenue should be recognized as the building is being constructed.

Brief Exercise 6–3

This contract qualifies for revenue recognition over time, because the performance obligation (to provide technology consulting services upon request) is consumed by the customer as the seller's work is performed. Therefore, Varga should recognize revenue of **\$4,000** ($\$6,000 \times 8/12$ months) in 2024.

Journal entries (not required):

May 1, 2024

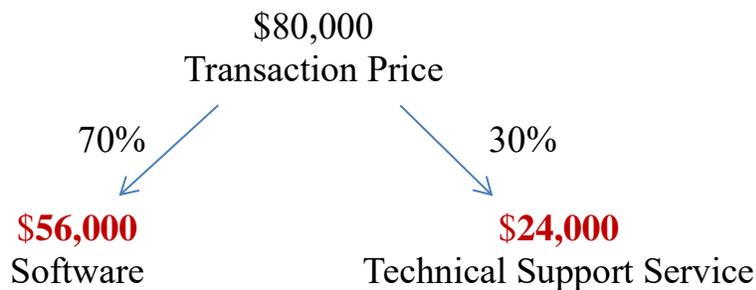
Cash	6,000	
Deferred revenue		6,000

December 31, 2024 adjusting entry

Deferred revenue	4,000	
Service revenue ($\$6,000 \times 8/12$)		4,000

Brief Exercise 6–4

Based on relative stand-alone selling prices, the software comprises **70%** of the total fair values ($\$70,000 \div [\$30,000 + \$70,000]$), and the technical support comprises **30%** ($\$30,000 \div [\$30,000 + \$70,000]$). Therefore, Sarjit would recognize **\$56,000** (equal to $\$80,000 \times 70\%$) in revenue when the software is delivered and defer the remaining **\$24,000** (equal to $\$80,000 \times 30\%$) to be recognized evenly over the next six months as the technical support service is provided.



The journal entry is recorded as follows:

Cash	80,000	
Sales revenue (for software)		56,000
Deferred revenue (for tech support)		24,000

Brief Exercise 6–5

\$0. Under U.S. GAAP, “probable” is defined as “likely to occur” or as “reasonably expected or believed on the basis of available evidence or logic but is neither certain nor proved,” which implies a relatively high likelihood of occurrence. Therefore, this contract would not qualify for revenue recognition under U.S. GAAP.

Brief Exercise 6–6

\$100,000. Under IFRS “probable” is defined as a likelihood that is greater than 50%. Therefore, this contract would qualify for revenue recognition under IFRS. (However, Tulane also would recognize a large bad debt expense associated with the contract, given concern that it might not be paid.)

Brief Exercise 6–7

Number of performance obligations in the contract: **1**.

Access to eLean services is one performance obligation. Registration on the website is not a performance obligation, but rather is part of the activity eLean must provide to satisfy its performance obligation of providing access to eLean’s on-line services. The \$50 payment is an upfront payment that is part of the total transaction price associated with the service, and the monthly payments are the other component.

Brief Exercise 6–8

Number of performance obligations in the contract: **1**.

We need to consider three aspects of the vacuum contract: delivery of the vacuum, the one-year quality-assurance warranty, and the option to purchase the three-year extended warranty. Delivery of the vacuum cleaner is a performance obligation. The one-year warranty that is included as part of the purchase (the quality-assurance warranty) is not a performance obligation, but rather is part of the obligation to deliver a vacuum of appropriate quality. The option to purchase a three-year extended warranty is not a performance obligation within the contract to purchase a vacuum, because customers can purchase that warranty for the same amount at other times, so the opportunity to buy it at the same time that they buy the vacuum does not present a material right.

Brief Exercise 6–9

Number of performance obligations in the contract: **2**.

We need to consider three aspects of the vacuum contract: delivery of the vacuum, the one-year quality-assurance warranty, and the option to purchase the three-year extended warranty. Delivery of the vacuum cleaner is a performance obligation. The one-year warranty that is included as part of the purchase (the quality-assurance warranty) is not a performance obligation, but rather it is part of the obligation to deliver a vacuum of appropriate quality. The option to purchase the extended warranty, though, is a performance obligation within the contract to purchase a vacuum. Customers can purchase that warranty at a 20% discount if they do so when they buy the vacuum, so the opportunity to buy the extended warranty constitutes a material right. Also, the option is *capable of being distinct*, as it could be sold or provided separately, and it is *separately identifiable*, as the vacuum could be sold without the option to purchase an extended warranty, so the option is distinct, and qualifies as a performance obligation.

Brief Exercise 6–10

Number of performance obligations in the contract: **2**.

In addition to the subscription, the renewal option is a performance obligation because it provides a material right that allows the customer to renew at a better price than could be obtained without the right. The renewed protection is *capable of being distinct*, as it could be sold or provided separately, and it is *separately identifiable*, as the customer can use the renewed protection on its own. Therefore, the renewed protection is distinct, and qualifies as a performance obligation.

Brief Exercise 6-11

Number of performance obligations in the contract: **1**.

The separate goods and services that Precision Equipment has agreed to provide (equipment, customized software package, and consulting services) might be *capable of being distinct*, but they are **not separately identifiable**. In the context of the contract, the goods and services are highly dependent on and interrelated with each other. The contractor's role is to integrate and customize them to create one automated assembly line.

Brief Exercise 6-12

Number of performance obligations in the contract: **1**.

Lego enters into a contract to design and construct a specific building. Each smaller component of the construction contract, though *capable of being distinct*, is **not separately identifiable** because each component is highly interrelated with each other, and providing them to the customer requires the seller to integrate the components into a combined item (garage).

Brief Exercise 6-13

Number of performance obligations in the contract: **1**.

A right of return is not a performance obligation. Instead, the right of return represents a potential failure to satisfy the original performance obligation to deliver goods to the customer. Because the total amount of cash received from the customer depends on the amount of returns, a right of return is a type of variable consideration.

Aria should estimate sales returns and reduce revenue by that amount in order to arrive at "net revenue," which would be the transaction price (the amount to be recorded as revenue on the seller's books). The total net revenue in this situation is **\$280,233**:

Revenue	\$288,900	(\$90 × 3,210 units)
Sales returns	<u>8,667</u>	(\$288,900 × 3%)
Net revenue	\$280,233	

Brief Exercise 6–14

The expected value would be calculated as follows:

<u>Possible Amounts</u>	<u>Probabilities</u>	<u>Expected Amounts</u>
\$35,000 (\$25,000 fixed fee + \$10,000 bonus)	× 50% =	\$17,500
\$25,000 (\$25,000 fixed fee + \$0 bonus)	× 50% =	<u>12,500</u>
Expected contract price at inception		\$30,000

Or, alternatively:

$$\$25,000 + (\$10,000 \times 50\%) = \mathbf{\$30,000}$$

Brief Exercise 6-15

When a contract includes variable consideration, sellers are constrained to recognize only the amount of revenue they believe is probable that they won't have to reverse (adjust downward) in the future if the variable consideration changes. In this case, factors outside the seller's control (stock market volatility) make the seller's estimate of variable consideration very uncertain, so the amount of revenue that Continental will recognize during the year is limited to the fixed annual management fee, which is \$1.5 million (1% of the client's \$150 million total assets under management). Therefore, Continental would use **\$1.5 million** as its estimate of the transaction price. Any performance bonus earned by Continental will be recognized as revenue if and when it is earned.

Brief Exercise 6–16

Finerly should recognize **\$0** of revenue upon delivery to distributors. Given the uncertainty about estimated returns, Finerly can't argue that it is probable that it won't have to reverse (adjust downward) a significant amount of revenue in the future because of a change in returns. Therefore, Finerly won't recognize revenue until it either can better estimate returns or sales to end consumers occur. Essentially, because Finerly can't estimate returns, it treats this transaction as if it is placing those goods on consignment with independent distributors.

Brief Exercise 6–17

Amazon will recognize revenue of **\$150**, its commission on the sale. In this transaction, Amazon never has primary responsibility for delivering a product or service, and it is not vulnerable to risks associated with holding inventory or delivering the product or service. Therefore, Amazon serves as an **agent**, and will only recognize revenue on the transaction equal to the amount of the commission it receives.

Brief Exercise 6–18

If payment occurs after delivery, conceptually the arrangement includes a financing component. When the financing component is deemed to be significant, receivables, like those of Wooten, we include an element of interest revenue (the buyer is borrowing from the seller between payment and delivery). So, to determine the component of the \$10,000 that represents sales, we must remove the interest component:

$$\begin{aligned}\text{Sales revenue} &= \text{present value of the amount to be paid on December 31, 2024} \\ &= \$10,000 \times 0.92593^{\text{¥}} \\ &= \mathbf{\$9,259}\end{aligned}$$

¥ Present value of \$1: $n = 1$, $i = 8\%$ (Table 2)

Brief Exercise 6–19

$$\text{Deferred revenue} = \text{amount received up front} = \$8,000$$

Brief Exercise 6–20

If a seller is purchasing distinct goods or services from a customer at the fair value of those goods or services, we account for that purchase as a separate transaction. Otherwise, excess payments by the seller are treated as a refund of the customer's purchase. If the payments are made (or are expected to be made) at the time of the original sale, the transaction price of the customer's purchase is reduced immediately by the refund. If payment is not expected at the time of the sale, revenue is recorded based on the full transaction price, and any subsequent payment by the seller above fair value results in a reduction of the transaction price at that time.

There is no indication that Lewis' payment to AdCo for \$10,000, which is \$2,500 more than the fair value of those services (\$7,500), was expected at the time of the original sale. Therefore, the original sale would be recorded based on the full transaction price of \$60,000. The overpayment of \$2,500 reduces the \$60,000 transaction price of the goods sold by Lewis to AdCo at the time the \$10,000 is paid, resulting in a downward adjustment of revenue of \$2,500 at that time and net revenue over the period of $\$60,000 - \$2,500 = \mathbf{\$57,500}$.

Brief Exercise 6–21

Under the *adjusted market assessment approach*, O'Hara would base its estimate of the stand-alone selling price of the club-fitting services on the prices charged by other vendors for those services, adjusted as necessary. Because O'Hara typically charges 10% more than what other vendors charge, O'Hara would estimate the stand-alone selling price of the club-fitting service to be $\$110 \times 110\% = \mathbf{\$121}$.

Brief Exercise 6–22

Under the *expected cost plus margin approach*, O’Hara would base its estimate of the stand-alone selling price of the club-fitting service on the \$60 cost it incurs to provide the services, plus its normal margin of $\$60 \times 30\% = \18 . Therefore, O’Hara would estimate the stand-alone selling price of the club-fitting services to be $\$60 + \$18 = \mathbf{\$78}$.

Brief Exercise 6–23

Under the *residual approach*, O’Hara would base its estimate of the stand-alone selling price of the club-fitting services on the total selling price of the contract (\$1,500) minus the observable stand-alone selling price of clubs (\$1,400). Therefore, O’Hara would estimate the stand-alone selling price of the club-fitting services to be $\$1,500 - \$1,400 = \mathbf{\$100}$.

Brief Exercise 6–24

The software is functional intellectual property and the license transfers a *right of use*, since Saar’s activities during the license period (which for this software does not have an end date) will not affect the value of the software to Kim. Therefore, Saar can recognize the entire \$100,000 upon transfer of the right. However, the SAAR Associates name is symbolic intellectual property, so the license to use the Saar name is an *access right*, with Saar’s ongoing activity affecting the benefit that Kim receives, so Saar should recognize revenue as that access is consumed over 36 months. Since Kim uses the Saar name for four months in 2024 (September through December), Saar should recognize revenue of $4 \div 36 = 1/9$ of \$90,000, or \$10,000, for that access right in 2024. In total, Saar recognizes revenue of $\$100,000 + \$10,000 = \mathbf{\$110,000}$ in 2024.

Brief Exercise 6–25

\$110,000. The software is functional intellectual property and the license transfers a right of use, since Saar's activities during the license period (which for this software does not have an end date) will not affect the value of the software to Kim. Therefore, Saar can recognize the entire \$100,000 upon transfer of the right. However, the Saar Associates name is symbolic intellectual property, so the license to use the Saar name is an access right, with Saar's ongoing activity affecting the benefit that Kim receives, so Saar should recognize revenue as that access is consumed over 36 months. Under U.S. GAAP it is not relevant that Saar will not provide any services with respect to the access right over the license period – it only matters that the license is classified as involving symbolic intellectual property. Since Kim uses the Saar name for four months in 2024 (September through December), Saar should recognize revenue of $4 \div 36 = 1/9$ of \$90,000, or \$10,000, for that access right in 2024. In total, Saar recognizes revenue of $\$100,000 + \$10,000 = \$110,000$ in 2024.

Brief Exercise 6–26

\$190,000. The software is functional intellectual property and the license transfers a right of use, since Saar's activities during the license period (which for this software does not have an end date) will not affect the value of the software to Kim. Therefore, Saar can recognize the entire \$100,000 upon transfer of the right. The Saar Associates name would be classified as symbolic intellectual property under U.S. GAAP, but under IFRS the focus is on whether the seller provides benefit to the customer over the license period. Given that is not the case, Saar would view this license as conveying a right of use, and could recognize \$90,000 of revenue for the license to use the Saar Associates name at the start of the license. In total, Saar recognizes revenue of $\$100,000 + \$90,000 = \$190,000$ in 2024.

Brief Exercise 6–27

Because Carlos had completed training and was open for business on August 1, 2024, TopChop apparently has satisfied its performance obligation with respect to the initial training, equipment and furnishings, so it would recognize \$50,000 of revenue in 2024. In addition, since Carlos was a franchisee for the last six months of 2024, TopChop should recognize $6 \div 12 = 50\%$ of a yearly fee of \$30,000, or \$15,000. In total, TopChop recognizes revenue from Carlos of $\$50,000 + \$15,000 =$ **\$65,000** in 2024.

Brief Exercise 6–28

\$0. Prior to delivery, Dowell maintains *control* of the inventory and should not recognize revenue.

Brief Exercise 6–29

\$250, equal to revenue for the sale of one painting. Kerianne has a consignment arrangement with Holmstrom, so should not recognize transfer of paintings to Holmstrom as sales. Kerianne would recognize Holmstrom's commission of $\$250 \times 20\% = \50 as an expense.

Brief Exercise 6–30

GoodBuy should not recognize revenue when it sells the \$1,000,000 of gift cards, because it has not yet satisfied its performance obligation to deliver goods upon redemption of the cards. GoodBuy should recognize revenue of \$840,000 for redemptions, as well as \$30,000 for gift cards that it estimates will never be redeemed, totaling **\$870,000**.

Brief Exercise 6–31

Contract asset: **\$0**.

Contract liability: **\$2,000**.

Accounts receivable: **\$0**.

Holt has a contract liability, deferred revenue, of **\$2,000**. It never has a contract asset because it hasn't satisfied a performance obligation for which payment depends on something other than the passage of time. It does not have an accounts receivable for the \$3,000 until it delivers the furniture to Ramirez.

Brief Exercise 6–32

For long-term contracts, we view a company as having a contract asset if CIP > Billings, so Cady has a contract asset for the first construction job of **\$6,000** (equal to \$20,000 CIP less \$14,000 billings). For long-term contracts, we view a company as having a contract liability if Billings > CIP, so Cady has a contract liability for the second construction job of **\$2,000** (equal to \$5,000 billings less \$3,000 CIP).

Brief Exercise 6–33

Total estimated cost to complete = \$6 million + \$9 million = \$15 million

% of completion = \$6 million ÷ \$15 million = 40%

First year revenue = \$20,000,000 x 40% = **\$8,000,000**

First year gross profit = \$8,000,000 – \$6,000,000 = **\$2,000,000**

Note: We can also determine first year gross profit as follows:

Total estimated gross profit (\$20 million – \$15 million)	=	\$5,000,000
multiplied by the % of completion		<u>40%</u>
Gross profit recognized the first year		\$2,000,000

Brief Exercise 6–34

Assets:

Accounts receivable (\$7 million – \$5 million)	\$2,000,000
CIP (\$6 million + \$2 million*) in excess of billings (\$7 million)	1,000,000

* First year gross profit = \$8,000,000 – \$6,000,000 = \$2,000,000

Brief Exercise 6–35

No revenue or gross profit recognized until project completed in year 2.

Year 2 revenue	\$20,000,000
Less: Costs in year 1	(6,000,000)
Costs in year 2	<u>(10,000,000)</u>
Year 2 gross profit	\$ 4,000,000

Brief Exercise 6–36

The anticipated loss of **\$3 million** (\$30 million contract price less total estimated costs of \$33 million) must be recognized in the first year applying either method.

EXERCISES

Exercise 6–1

The *FASB Accounting Standards Codification*[®] represents the single source of authoritative U.S. generally accepted accounting principles.

Requirement 1

Regarding the five steps used to apply the revenue recognition principle, the appropriate citation is:

FASB ASC 606–10–05–04: “Revenue from Contracts with Customers—Overall—Overview and Background—General.”

Requirement 2

Regarding indicators that control has passed from the seller to the buyer, such that it is appropriate to recognize revenue at a point in time, the appropriate citation is:

FASB ASC 606–10–25–30: “Revenue from Contracts with Customers—Overall—Recognition—Performance Obligations Satisfied at a Point in Time.”

Requirement 3

Regarding circumstances under which sellers can recognize revenue over time, the appropriate citation is:

FASB ASC 606–10–25–27: “Revenue from Contracts with Customers—Overall—Recognition—Performance Obligations Satisfied Over Time.”

Exercise 6–2

Requirement 1

Ski West should recognize revenue over the ski season. Ski West fulfills its performance obligation over time as it delivers the service to its pass holders by providing access to its ski lifts.

Requirement 2

November 6, 2024 To record the cash collection.		
Cash	450	
Deferred revenue		450
 December 31, 2024 To recognize revenue earned in December (no revenue earned in November, as season starts on December 1).		
Deferred revenue ($\$450 \times \frac{1}{5}$).....	90	
Service revenue.....		90

Requirement 3

\$90 is included in revenue in Ski West's 2024 income statement. The \$360 remaining balance in deferred revenue is included in the current liability section of Ski West's 2024 balance sheet.

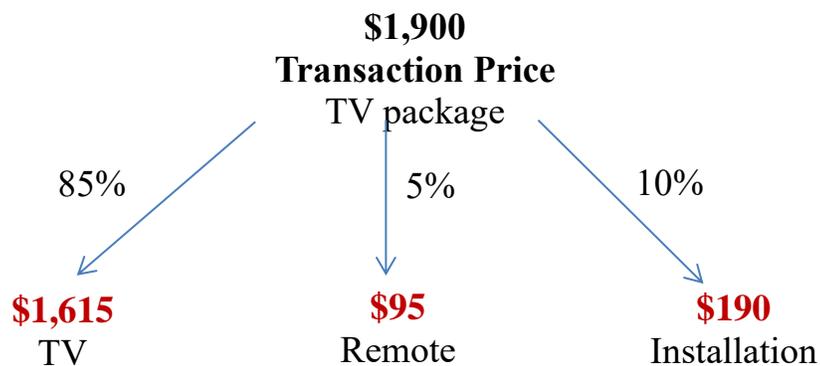
Exercise 6–3

VP first must identify each performance obligation's share of the sum of the stand-alone selling prices of all performance obligations:

TV:	$\frac{\$1,700}{\$1,700 + \$100 + \$200}$	= 85%
Remote:	$\frac{\$100}{\$1,700 + \$100 + \$200}$	= 5%
Installation:	$\frac{\$200}{\$1,700 + \$100 + \$200}$	= 10%
		100%

VP would allocate the total selling price of the package (\$1,900) based on stand-alone selling prices, as follows:

TV:	\$1,900	×	85%	=	\$1,615
Remote:	\$1,900	×	5%	=	95
Installation:	\$1,900	×	10%	=	<u>190</u>
					\$1,900



Exercise 6–4

The *FASB Accounting Standards Codification*[®] represents the single source of authoritative U.S. generally accepted accounting principles.

Requirement 1

Regarding the basis upon which a contract’s transaction price allocated to its performance obligations, the appropriate citation is:

FASB ASC 606–10–32–29: “Revenue from Contracts with Customers—Overall—Measurement—Allocating the Transaction Price to Performance Obligations.”

Requirement 2

Regarding indicators that a promised good or service is separately identifiable, the appropriate citation is:

FASB ASC 606–10–25–21: “Revenue from Contracts with Customers—Overall—Recognition—Identifying Performance Obligations—Distinct Goods or Services.”

Requirement 3

Regarding circumstances under which an option is viewed as a performance obligation, the appropriate citation is:

FASB ASC 606–10–55–42: “Revenue from Contracts with Customers—Overall—Implementation Guidance and Illustrations—Customer Options for Additional Goods or Services.”

Exercise 6-5

Requirement 1

Number of performance obligations in the contract: **2**.

Delivery of gold is one performance obligation. The additional insurance for replacement of gold bars is a second performance obligation. The insurance service is *capable of being distinct* because the bank could choose to receive similar services from another insurance provider, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of delivering gold, and the seller's role is not to integrate and customize them to create one service or product. So, the insurance qualifies as a performance obligation. The receipt of cash prior to delivery is not a performance obligation, but rather gives rise to deferred revenue associated with performance obligations to be satisfied in the future.

Requirement 2

Value of the **gold bars**:

$$\$1,440/\text{unit} \times 100 \text{ units} = \$144,000$$

Stand-alone selling price of the **insurance**:

$$\$60 \times 100 \text{ units} = \underline{\underline{6,000}}$$

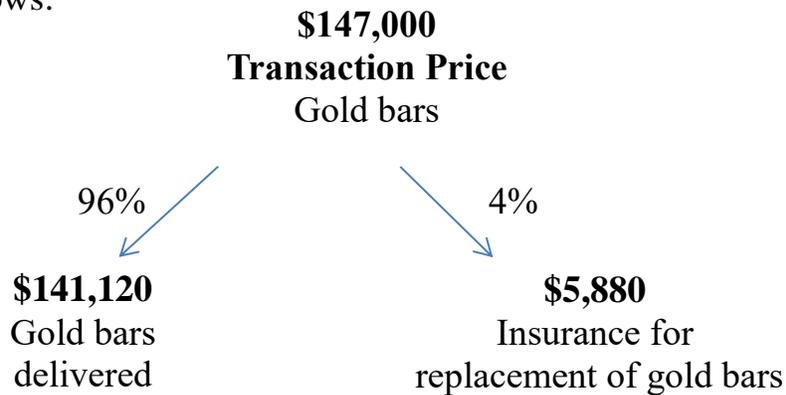
$$\text{Total of stand-alone prices} \quad \underline{\underline{\$150,000}}$$

Gold Examiner first identifies each performance obligation's share of the sum of the stand-alone selling prices of all deliverables:

Gold bars delivered:	$\frac{\$144,000}{\$144,000 + \$6,000}$	= 96%
Insurance:	$\frac{\$6,000}{\$144,000 + \$6,000}$	= 4%
		100%

Exercise 6-5 (concluded)

Gold Examiner then allocates the total selling price based on stand-alone selling prices, as follows:



Entry on March 1, 2024:

Cash	147,000	
Deferred revenue		141,120
Deferred revenue – insurance		5,880

Requirement 3

Entry on March 30, 2024:

Deferred revenue	141,120	
Sales revenue		141,120

Gold Examiner recognizes only the portion of revenue associated with passing of the legal title. The revenue associated with insurance coverage will be earned only when that performance obligation is satisfied.

Requirement 4

Entry on April 1, 2024:

Deferred revenue – insurance	5,880	
Service revenue		5,880

Exercise 6–6

Requirement 1

Number of performance obligations in the contract: **2**.

The delivery of SunBoots is one performance obligation. The option for discount on additional future purchases is a second performance obligation because it provides a material right to the customer that the customer would not receive without the purchase of SunBoots. That material right to receive a discount is both *capable of being distinct*, as it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of delivering SunBoots, and the seller's role is not to integrate and customize them to create one product. So, the discount option represented by the coupon is distinct and qualifies as a performance obligation.

Requirement 2

If Clarks can't estimate the stand-alone selling price of SunBoots, it will use the residual method to calculate that price as the amount of the total transaction price minus the value of the discount.

Cash (1,000 x \$70)	70,000	
Sales revenue (to balance)		64,000
Deferred revenue – coupons (discount option)		6,000*

*(1,000 pairs × \$100 average purchase price × 30% discount × 20% of customers estimated to redeem coupon)

Exercise 6–7

Requirement 1

The amount of revenue Manhattan Today should recognize upon receipt of the subscription fee: **\$0**.

Even though Manhattan Today received payments from customers for an annual subscription, payment of the subscription activity does not transfer goods or services to customers. Therefore, the annual fee is viewed as a prepayment for future delivery of goods or services and would be recognized as deferred revenue – subscription (a liability) when received. Later, when newspapers are delivered, deferred revenue – subscription will be reduced and revenue recognized.

Requirement 2

Number of performance obligations in the contract: **2**.

Delivery of newspapers for one year is one performance obligation. The option to receive a 40% discount on a carriage ride qualifies as a second performance obligation. First, it is an option that conveys a material right to the recipient (as opposed to just a general marketing offer). Second, it is both *capable of being distinct*, as it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of delivering newspapers, so the discount, as represented by the coupon, is distinct and qualifies as a performance obligation. The seller's role is not to integrate and customize them to create one product. The seller will record deferred revenue – coupons for that performance obligation and recognize revenue when either the coupons are exercised or Manhattan Today estimates that they will not be redeemed.

Exercise 6–7 (concluded)

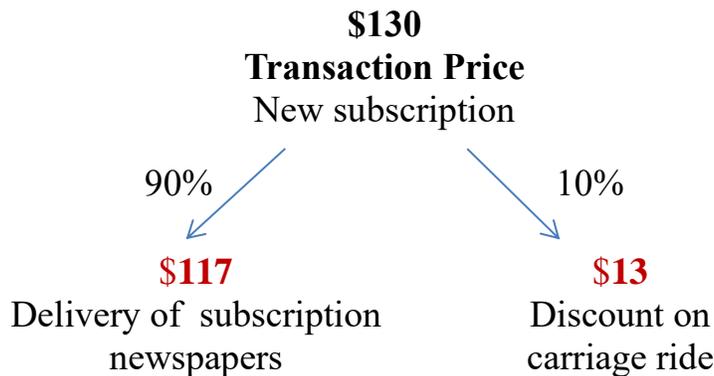
Requirement 3

Value of the coupon: 40% discount × \$125 carriage fee = \$ 50	
Estimated redemption	× <u>30%</u>
Stand-alone selling price of coupon	\$ 15
Stand-alone selling price of a normal subscription	<u>135</u>
Total of stand-alone prices	<u><u>\$150</u></u>

Manhattan Today must identify each performance obligation’s share of the sum of the stand-alone selling prices of all deliverables:

Coupon:	$\frac{\$15}{\$15 + \$135} = 10\%$
Subscription:	$\frac{\$135}{\$15 + \$135} = 90\%$
	100%

Manhattan Today allocates the total selling price based on stand-alone selling prices, as follows:



Upon receiving the fee for 10 new subscriptions, the journal entry should be:

Cash (\$130 × 10)	1,300	
Deferred subscription revenue (\$117 × 10)		1,170
Deferred revenue – coupons (\$13 × 10)		130

Exercise 6-8

Requirement 1

Number of performance obligations in the contract: **2**.

Delivery of keyboards is one performance obligation. The option to receive a special discount is a second performance obligation, as it provides a material right that the customer would not receive had it not bought the keyboards. In this particular instance, the customer has the right to receive a 25% discount for any purchases in the next six months, which is a 20% discount in addition to the normal 5% discount offered to other customers. The option to receive the discount, represented by the coupon, is both *capable of being distinct*, as it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of delivering keyboards, and the seller's role is not to integrate and customize them to create one product. So, it is distinct and qualifies as a performance obligation.

Requirement 2

When two or more performance obligations are associated with a single transaction price, the transaction price must be allocated to the performance obligations on the basis of respective stand-alone selling prices (estimated if not directly available).

Meta's estimated stand-alone selling price of the discount option is:

Value of the discount coupon:

(25% discount – 5% normal discount) × \$20,000 =	\$ 4,000
Estimated redemption	<u>× 50%</u>
Stand-alone selling price of discount coupon:	\$ 2,000

Stand-alone selling price of the keyboards:

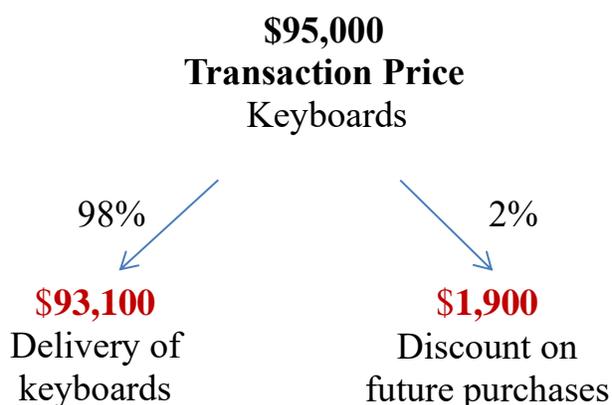
\$19.60 × 5,000 keyboards =	<u>98,000</u>
Total of stand-alone prices	<u>\$100,000</u>

Exercise 6–8 (continued)

Meta first must identify each performance obligation's share of the sum of the stand-alone selling prices of all deliverables:

Discount:	$\frac{\$2,000}{\$2,000 + \$98,000}$	= 2%
Keyboards:	$\frac{\$98,000}{\$2,000 + \$98,000}$	= 98%
		100%

Meta then allocates the total selling price based on stand-alone selling prices, as follows:



The journal entry to record the sale is:

Cash	95,000	
Deferred revenue		93,100
Deferred revenue – coupons		1,900

The deferred revenue for the keyboards will become recognized as revenue on June 1st.

The deferred revenue for the option to exercise the discount coupon is recognized when the coupon either is exercised or expires in six months.

Exercise 6-8 (concluded)

Requirement 3

All customers are eligible for a 5% discount on all sales. Therefore, the 5% discount option issued to Bionics, Inc. does not give any material right to the customer, so it is not a performance obligation in the contract, and Meta would account for both (a) the delivery of keyboards and (b) the 5% coupon as a single performance obligation.

Cash	95,000	
Deferred revenue		95,000

Exercise 6–9

Requirement 1

The expected value would be calculated as follows:

<u>Possible Amounts</u>	<u>Probabilities</u>	<u>Expected Amounts</u>
\$70,000 (\$50,000 fixed fee + \$20,000 bonus)	× 20% =	\$14,000
\$50,000 (\$50,000 fixed fee + \$0 bonus)	× 80% =	<u>40,000</u>
Expected contract price at inception		\$54,000

Or, alternatively: $\$50,000 + (\$20,000 \times 20\%) = \mathbf{\$54,000}$

Requirement 2

The most likely amount is the flat fee of **\$50,000**, because there is a greater chance of not qualifying for the bonus than of qualifying for the bonus, so that is the transaction price.

Requirement 3

Because Thomas is very uncertain of its estimate, Thomas can't argue that it is probable that it won't have to reverse (adjust downward) a significant amount of revenue in the future because of a change in returns. Therefore, Thomas would not include the bonus estimate in the transaction price, and the transaction price would be the flat fee of **\$50,000**.

Exercise 6-10

Requirement 1

During the July 1 – July 15 period, Rocky estimates a less than 50% chance it will earn the bonus, so using the “most likely amount” approach, it assumes no bonus, and estimates its revenue as \$1,000 per day × 10 days = **\$10,000**

Accounts receivable	10,000	
Service revenue (\$1,000 × 10 days)		10,000

Requirement 2

During the July 16 – July 31 period, Rocky earns guide revenue of another 15 days × \$1,000 per day = \$15,000. In addition, because Rocky estimates a greater than 50% chance it will earn the bonus, using the “most likely amount” approach, it estimates a bonus receivable of \$100 per day × (10 days + 15 days) = **\$2,500**.

Accounts receivable (\$1,000 × 15 days)	15,000	
Bonus receivable (\$100 × 25 days)	2,500	
Service revenue (to balance)		17,500

Requirement 3

On August 5, Rocky learns that it won't receive a bonus, and receives only the **\$25,000** balance in accounts receivable. Rocky must reduce its bonus receivable to zero and record the offsetting adjustment in revenue.

Cash (\$1,000 × 25 days)	25,000	
Accounts receivable		25,000
Service revenue (\$100 × 25 days)	2,500	
Bonus receivable		2,500

Exercise 6-11

Requirement 1

Rocky's normal guide revenue is 10 days \times \$1,000 per day = \$10,000. Rocky also estimates that there is a 30% chance it will earn the bonus, so its estimate of the expected value of the bonus revenue earned to date is:

<u>Possible Amounts</u>	<u>Probabilities</u>	<u>Expected Amounts</u>
\$1,000 (\$100 bonus \times 10 days)	\times 30% =	\$300
\$0 (\$0 bonus \times 10 days)	\times 70% =	<u>-0-</u>
Expected bonus as of July 15		\$300

Or, alternatively: $\$100 \times 10 \text{ days} \times 30\% = \mathbf{\$300}$.

Rocky's July 15 journal entry would be:

Accounts receivable (\$1,000 \times 10 days)	10,000	
Bonus receivable (\$100 \times 30% \times 10 days)	300	
Service revenue		10,300

Requirement 2

During the July 16 – July 31 period, Rocky earns another 15 days \times \$1,000/day = \$15,000 of its normal guiding revenue. In addition, because Rocky now believes there is an 80% chance it will earn the bonus, its estimate of the expected value of the bonus revenue earned to date (based on all 25 days guided during July) is:

<u>Possible Amounts</u>	<u>Probabilities</u>	<u>Expected Amounts</u>
\$2,500 (\$100 bonus \times 25 days)	\times 80% =	\$2,000
\$0 (\$0 bonus \times 25 days)	\times 20% =	<u>-0-</u>
Expected bonus as of July 31		\$2,000

Or, alternatively: $\$100 \times 25 \text{ days} \times 80\% = \mathbf{\$2,000}$.

Exercise 6-11 (concluded)

With \$300 of bonus receivable and revenue already recognized, Rocky must recognize an additional $\$2,000 - \$300 = \mathbf{\$1,700}$ of bonus receivable and bonus revenue. Rocky's July 31 journal entry would be:

Accounts receivable ($\$1,000 \times 15$ days)	15,000	
Bonus receivable ($[\$100 \times 80\% \times 25 \text{ days}] - \300)	1,700	
Service revenue (to balance)		16,700

Requirement 3

On August 5, Rocky learns that it won't receive a bonus, and receives only the \$25,000 balance in accounts receivable. Rocky also must reduce its bonus receivable to zero and record the offsetting adjustment in revenue.

Cash ($\$1,000 \times 25$)	25,000	
Accounts receivable		25,000
Service revenue ($\$100 \times 80\% \times 25$ days)	2,000	
Bonus receivable		2,000

Exercise 6–12

Requirement 1

If payment occurs after delivery, conceptually the arrangement includes a financing component (the buyer is borrowing from the seller between payment and delivery). Therefore, when the financing component is deemed to be significant, the seller must account for interest revenue. To determine the component of the \$40,000 that represents sales revenue, we must remove the interest component:

January 1, 2024:

Notes receivable (given)	40,000	
Discount on notes receivable (to balance)		2,963
Sales revenue (calculated below)		37,037

$$\begin{aligned}\text{Revenue} &= \text{present value of the amount to be paid on December 31, 2024} \\ &= \$40,000 \times 0.92593^{\text{¥}} \\ &= \$37,037\end{aligned}$$

¥ Present value of \$1: $n = 1, i = 8\%$ (Table 2)

Requirement 2

December 31, 2024:

Cash (given)	40,000	
Discount on notes receivable (from requirement 1)	2,963	
Notes receivable (given)		40,000
Interest revenue (to balance)		2,963

Exercise 6-12 (concluded)

Requirement 3

January 1, 2024:

Notes receivable (given)	40,000	
Discount on notes receivable (to balance)		5,706
Sales revenue (calculated below)		34,294

Revenue = present value of the amount to be paid on December 31, 2025
= $\$40,000 \times 0.85734^{\text{¥}}$
= $\$34,294$

¥ Present value of \$1: $n = 2, i = 8\%$ (Table 2)

Requirement 4

If the financing component is deemed to be *insignificant*, we can ignore the interest component:

January 1, 2024:

Notes receivable (given)	40,000	
Sales revenue (to balance)		40,000

Exercise 6–13

Requirement 1

January 1, 2024:

If payment occurs before delivery, conceptually the arrangement includes a financing component (the seller is borrowing from the buyer between payment and delivery). Therefore, when the financing component is deemed to be significant, the seller must account for interest expense. However, at the time the prepayment occurs, the entire amount received is viewed as deferred revenue:

Cash (calculated below)	37,037	
Deferred revenue (to balance)		37,037

Deferred revenue = amount received on January 1, 2024 = present value of the fair value of the goods to be delivered on December 31, 2024
= $\$40,000 \times 0.92593^{\text{¥}}$
= $\$37,037$

$^{\text{¥}}$ Present value of \$1: $n = 1, i = 8\%$ (Table 2)

Requirement 2

December 31, 2024:

Interest expense ($\$37,037 \times 8\%$)	2,963	
Deferred revenue (from requirement 1)	37,037	
Sales revenue (given)		40,000

Requirement 3

January 1, 2024:

Cash (calculated below)	34,294	
Deferred revenue (to balance)		34,294

Deferred revenue = amount received on January 1, 2024 = present value of the fair value of the goods to be delivered on December 31, 2025
= $\$40,000 \times 0.85734^{\text{¥}}$
= $\$34,294$

$^{\text{¥}}$ Present value of \$1: $n = 2, i = 8\%$ (Table 2)

Exercise 6-13 (concluded)

Requirement 4

If the financing component is deemed to be *insignificant*, we can ignore the interest component:

January 1, 2024:

Cash (from requirement 1)	37,037	
Deferred revenue (to balance)		37,037

Exercise 6–14

Requirement 1

Record revenue upon sale:

Accounts receivable	150,000	
Sales revenue		150,000

Requirement 2

Because the advertising services have a fair value (\$5,000) that is less than the amount paid by Furtastic to Willett (\$12,000), the remaining amount (\$7,000) is viewed as a refund, reducing revenue by that amount.

Advertising expense	5,000	
Sales revenue	7,000	
Cash		12,000

Requirement 3

Record receipt of cash:

Cash	150,000	
Accounts receivable		150,000

Requirement 4

It is probable that Willett will pay Furtastic, so the relatively low likelihood of bad debts does not affect Furtastic's recognition of revenue on the Willet sale. If Furtastic had considered it less than probable that it would collect its receivable from Willet, it would not have a contract on June 1 for purposes of revenue recognition, and would not recognize revenue until payment actually occurred on June 30.

Exercise 6–15

Requirement 1

Under the adjusted market assessment approach, VP would base its estimate of the stand-alone selling price of the installation service on the prices charged by other vendors for that service, adjusted as necessary. Given that the other vendors are similar to VP, no adjustment is necessary. Therefore, VP would estimate the stand-alone selling price of the installation service to be **\$150**, the amount charged by competitors for that service.

Requirement 2

Under the expected cost plus margin approach, VP would base its estimate of the stand-alone selling price of the installation service on the \$100 cost it incurs to provide the service, plus its normal margin of $40\% \times \$100 = \40 . Therefore, VP would estimate the stand-alone selling price of the installation service to be $\$100 + \$40 = \mathbf{\$140}$.

Requirement 3

Under the residual approach, VP would base its estimate of the stand-alone selling price of the installation service on the total selling price of the package (\$1,900) less the observable stand-alone selling prices of the TV (\$1,750) and universal remote (\$100). Therefore, VP would estimate the stand-alone selling price of the installation service to be $\$1,900 - (\$1,750 + \$100) = \mathbf{\$50}$.

Exercise 6–16

The *FASB Accounting Standards Codification*[®] represents the single source of authoritative U.S. generally accepted accounting principles.

Requirement 1

Regarding the alternative approaches that can be used to estimate variable consideration, the appropriate citation is:

FASB ASC 606–10–32–08: “Revenue from Contracts with Customers–Overall–Measurement–Variable Consideration.”

Requirement 2

Regarding the alternative approaches that can be used to estimate the stand-alone selling price of performance obligations that are not sold separately, the appropriate citation is:

FASB ASC 606–10–32–34: “Revenue from Contracts with Customers–Overall–Measurement–Allocation Based on Standalone Selling Prices.”

Requirement 3

Regarding the timing of revenue recognition with respect to licenses, the appropriate citation is:

FASB ASC 606–10–55–60: “Revenue from Contracts with Customers–Overall–Implementation Guidance and Illustrations–Determining the Nature of the Entity’s Promise.”

Requirement 4

Regarding indicators for assessing whether a seller is a principal, the appropriate citation is:

FASB ASC 606–10–55–39: “Revenue from Contracts with Customers–Overall–Implementation Guidance and Illustrations–Principal versus Agent Considerations.”

Exercise 6–17

Requirement 1

Total amount of franchise agreement	\$600,000
Less: stand-alone selling price of training	(15,000)
Less: stand-alone selling price of building and equip.	<u>(450,000)</u>
Stand-alone selling price of five-year right	<u>\$135,000</u>

Requirement 2

As of July 1, 2024, Monitor has not fulfilled any of its performance obligations, so the entire **\$600,000** franchise fee is recorded as deferred revenue.

Cash	75,000	
Notes receivable	525,000	
Deferred revenue		600,000

Requirement 3

On September 1, 2024, Monitor has satisfied its performance obligations with respect to training and certifying Perkins and delivering an equipped Monitor Muffler building. Therefore, Monitor should recognize revenue of $\$15,000 + \$450,000 = \$465,000$ on that date. In addition, by December 31, 2024, Monitor should recognize 4 months of revenue (September – December) associated with the five-year right it granted to Perkins, so Monitor should recognize revenue of $\$135,000 \times (4 \div (5 \times 12)) = \$9,000$ associated with that right. Total revenue recognized for the year ended December 31, 2024, is $\$465,000 + \$9,000 = \mathbf{\$474,000}$.

Exercise 6–18

The *FASB Accounting Standards Codification*[®] represents the single source of authoritative U.S. generally accepted accounting principles.

Requirement 1

Regarding disclosures that are required with respect to performance obligations that the seller is committed to satisfying but that are not yet satisfied, the appropriate citation is:

FASB ASC 606–10–50–12: “Revenue from Contracts with Customers–Overall–Disclosure–Performance Obligations.”

Requirement 2

Regarding disclosures that are required with respect to uncollectible accounts receivable, also called impairment losses on receivables, the appropriate citation is:

FASB ASC 606–10–50–4: “Revenue from Contracts with Customers–Overall–Disclosure–Contracts with Customers.”

Requirement 3

Regarding disclosures that are required with respect to contract assets and contract liabilities, the appropriate citation is:

FASB ASC 606–10–50–10: “Revenue from Contracts with Customers–Overall–Disclosure–Contract Balances.”

Exercise 6–19

Requirement 1

	2024	2025
Contract price	<u>\$2,000,000</u>	<u>\$2,000,000</u>
Actual costs to date	300,000	1,875,000
Estimated costs to complete	<u>1,200,000</u>	<u>- 0 -</u>
Total estimated costs	<u>1,500,000</u>	<u>1,875,000</u>
Gross profit (estimated in 2024)	<u>\$ 500,000</u>	<u>\$ 125,000</u>

Revenue recognition:

$$\begin{array}{l} \text{2024: } \$ 300,000 \\ \hline \qquad \qquad \qquad = 20\% \times \$2,000,000 = \mathbf{\$400,000} \\ \qquad \qquad \qquad \$1,500,000 \end{array}$$

$$\text{2025: } \$2,000,000 - \$400,000 = \mathbf{\$1,600,000}$$

Gross profit recognition:

$$\text{2024: } \$400,000 - \$300,000 = \mathbf{\$100,000}$$

$$\text{2025: } \$1,600,000 - \$1,575,000 = \mathbf{\$25,000}$$

Note: We also can calculate gross profit directly using the percentage of completion:

$$\begin{array}{l} \text{2024: } \$ 300,000 \\ \hline \qquad \qquad \qquad = 20\% \times \$500,000 = \mathbf{\$100,000} \\ \qquad \qquad \qquad \$1,500,000 \end{array}$$

$$\text{2025: } \$125,000 - \$100,000 = \mathbf{\$25,000}$$

Requirement 2

$$\text{2024: } \$0 \text{ (contract not yet completed)}$$

$$\text{2025: } \$2,000,000 - \$1,875,000 = \$125,000$$

Exercise 6–19 (concluded)

Requirement 3

Balance Sheet	
At December 31, 2024	
<i>Current assets:</i>	
Accounts receivable	\$ 130,000
CIP (\$400,000*) in excess of billings (\$380,000)	20,000

* Costs (\$300,000) + profit (\$100,000)

Requirement 4

Balance Sheet	
At December 31, 2024	
<i>Current assets:</i>	
Accounts receivable	\$ 130,000
<i>Current liabilities:</i>	
Billings (\$380,000) in excess of CIP (\$300,000)	\$ 80,000

Exercise 6–20

Requirement 1

(\$ in millions)	2024	2025	2026
Contract price	<u>\$220</u>	<u>\$220</u>	<u>\$220</u>
Actual costs to date	40	120	170
Estimated costs to complete	<u>120</u>	<u>60</u>	<u>- 0 -</u>
Total estimated costs	<u>160</u>	<u>180</u>	<u>170</u>
Estimated gross profit (actual in 2026)	<u>\$ 60</u>	<u>\$ 40</u>	<u>\$ 50</u>

Revenue recognition:

$$\text{2024: } \frac{\$40}{\$160} = 25\% \times \$220 = \mathbf{\$55}$$

$$\text{2025: } \frac{\$120}{\$180} = (66.67\% \times \$220) - \$55 = \mathbf{\$91.67}$$

$$\text{2026: } \$220 - (\$55 + \$91.67) = \mathbf{\$73.33}$$

Gross profit (loss) recognition:

$$\text{2024: } \$55 - \$40 = \mathbf{\$15}$$

$$\text{2025: } \$91.67 - \$80 = \mathbf{\$11.67}$$

$$\text{2026: } \$73.33 - \$50 = \mathbf{\$23.33}$$

Note: We also can calculate gross profit directly using the percentage of completion:

$$\text{2024: } \frac{\$40}{\$160} = 25\% \times \$60 = \mathbf{\$15}$$

$$\text{2025: } \frac{\$120}{\$180} = 66.67\% \times \$40 = \$26.67 - \$15 = \mathbf{\$11.67}$$

$$\text{2026: } \$220 - \$170 - (\$15 + \$11.67) = \mathbf{\$23.33}$$

Exercise 6–20 (concluded)

Requirement 2

Year	Revenue recognized	Gross profit (loss) recognized
2024	- 0 -	- 0 -
2025	- 0 -	- 0 -
2026	\$220	\$50

Requirement 3

2025 Revenue recognition:

$$\frac{\$120}{\$200} = (60\% \times \$220) - \$55 = \mathbf{\$77}$$

2025 Gross profit (loss) recognition:

$$\$77 - \$80 = \mathbf{\$(3) \text{ loss}}$$

Note: Also can calculate gross profit directly using the percentage of completion:

$$\frac{\$120}{\$200} = 60\% \times \$20^* = \$12 - \$15 = \mathbf{\$(3) \text{ loss}}$$

$$*\$220 - (\$40 + \$80 + \$80) = \$20$$

Exercise 6–21

Requirement 1

	2024	2025	2026
Contract price	<u>\$8,000,000</u>	<u>\$8,000,000</u>	<u>\$8,000,000</u>
Actual costs to date	2,000,000	4,500,000	8,300,000
Estimated costs to complete	<u>4,000,000</u>	<u>3,600,000</u>	<u>- 0 -</u>
Total estimated costs	<u>6,000,000</u>	<u>8,100,000</u>	<u>8,300,000</u>
Estimated gross profit (loss) (actual in 2026)	<u>\$2,000,000</u>	<u>\$ (100,000)</u>	<u>\$ (300,000)</u>

Revenue recognition:

$$\begin{array}{l} \text{2024: } \$2,000,000 \\ \hline \text{\$6,000,000} \end{array} = 33.3333\% \times \$8,000,000 = \mathbf{\$2,666,667}$$

$$\begin{array}{l} \text{2025: } \$4,500,000 \\ \hline \text{\$8,100,000} \end{array} = (55.5556\% \times \$8,000,000) - \$2,666,667 = \mathbf{\$1,777,778}$$

$$\text{2026: } \$8,000,000 - (\$2,666,667 + \$1,777,778) = \mathbf{\$3,555,555}$$

Gross profit (loss) recognition:

$$\text{2024: } \$2,666,667 - \$2,000,000 = \mathbf{\$666,667}$$

$$\text{2025: } \$ (100,000) - \$666,667 = \mathbf{\$(766,667)}$$

$$\text{2026: } \$ (300,000) - \$ (100,000) = \mathbf{\$(200,000)}$$

Exercise 6–21 (continued)

Requirement 2

	2024	2025
Construction in progress	2,000,000	2,500,000
Cash, Materials, etc.	2,000,000	2,500,000
To record construction costs		
Accounts receivable	2,500,000	2,750,000
Billings on construction contract	2,500,000	2,750,000
To record progress billings		
Cash	2,250,000	2,475,000
Accounts receivable	2,250,000	2,475,000
To record cash collections		
Construction in progress	666,667	
Cost of construction	2,000,000	
Revenue from long-term contracts	2,666,667	
To record gross profit		
Cost of construction (1)		2,544,445
Revenue from long-term contracts		1,777,778
Construction in progress		766,667
To record expected loss		

(1)	Revenue recognized in 2025	\$1,777,778
	Plus: Loss recognized in 2025 (from previous page)	<u>766,667</u>
	Cost of construction, 2025	<u><u>\$2,544,445</u></u>

Exercise 6–21 (concluded)

Requirement 3

	2024	2025
Balance Sheet		
<i>Current assets:</i>		
Accounts receivable	\$250,000	\$525,000
CIP (\$2,666,667*) in excess of billings (\$2,500,000)	166,667	
<i>Current liabilities:</i>		
Billings (\$5,250,000) in excess of CIP (\$4,400,000**)		\$850,000

* Costs (\$2,000,000) + profit (\$666,667)

** Costs (\$2,000,000 + \$2,500,000) – loss (\$100,000 = \$766,667 – \$666,667)

Exercise 6–22

Requirement 1

Year	Revenue recognized	Gross profit (loss) recognized
2024	- 0 -	- 0 -
2025	- 0 -	\$(100,000)
2026	\$8,000,000	(200,000)
Total	\$8,000,000	\$(300,000)

Requirement 2

	2024	2025
Construction in progress	2,000,000	2,500,000
Cash, Materials, etc.	2,000,000	2,500,000
To record construction costs		
Accounts receivable	2,500,000	2,750,000
Billings on construction contract	2,500,000	2,750,000
To record progress billings		
Cash	2,250,000	2,475,000
Accounts receivable	2,250,000	2,475,000
To record cash collections		
Loss on long-term contract		100,000
Construction in progress		100,000
To record expected loss		

Exercise 6–22 (concluded)

Requirement 3

Balance Sheet	2024	2025
<i>Current assets:</i>		
Accounts receivable	\$250,000	\$525,000
<i>Current liabilities:</i>		
Billings (\$2,500,000) in excess of CIP (\$2,000,000)	\$500,000	
Billings (\$5,250,000) in excess of CIP (\$4,400,000*)		\$850,000

* Costs (\$2,000,000 + \$2,500,000) – loss (\$100,000)

Note: Billings in excess of CIP is a contract liability, similar to deferred profit.

Exercise 6–23

SUMMARY

Situation	<u>Gr. Profit Recognized Over Time</u>			<u>Gr. Profit Recognized Upon Completion</u>		
	2024	2025	2026	2024	2025	2026
1	\$166,667	\$233,333	\$100,000	\$0	\$0	\$500,000
2	\$166,667	\$(66,667)	\$100,000	\$0	\$0	\$200,000
3	\$166,667	\$(266,667)	\$(100,000)	\$0	\$(100,000)	\$(100,000)
4	\$125,000	\$375,000	\$0	\$0	\$0	\$500,000
5	\$125,000	\$(125,000)	\$200,000	\$0	\$0	\$200,000
6	\$(100,000)	\$(100,000)	\$(100,000)	\$(100,000)	\$(100,000)	\$(100,000)

Situation 1 - Revenue Recognized Over Time

	2024	2025	2026
Contract price	<u>\$5,000,000</u>	<u>\$5,000,000</u>	<u>\$5,000,000</u>
Actual costs to date	1,500,000	3,600,000	4,500,000
Estimated costs to complete	<u>3,000,000</u>	<u>900,000</u>	<u>- 0 -</u>
Total estimated costs	<u>4,500,000</u>	<u>4,500,000</u>	<u>4,500,000</u>
Estimated gross profit (actual in 2026)	<u>\$ 500,000</u>	<u>\$ 500,000</u>	<u>\$ 500,000</u>

Gross profit (loss) recognized:

2024:

$$\text{Revenue} = \frac{\$1,500,000}{\$4,500,000} = 33.3333\% \times \$5,000,000 = \$1,666,667$$

$$\text{Gross Profit} = 1,666,667 - \$1,500,000 = \mathbf{\$166,667}$$

Note: We can calculate gross profit directly as

$$\frac{\$1,500,000}{\$4,500,000} = 33.3333\% \times \$500,000 = \mathbf{\$166,667}$$

2025:

$$\text{Revenue} = \frac{\$3,600,000}{\$4,500,000} = 80.0\% \times \$5,000,000 = \$4,000,000 - \$1,666,667 = \$2,333,333$$

$$\text{Gross Profit} = 2,333,333 - \$2,100,000 = \mathbf{\$233,333}$$

Exercise 6–23 (continued)

Note: We can calculate gross profit directly as:

$$\frac{\$3,600,000}{\$4,500,000} = 80.0\% \times \$500,000 = \$400,000 - \$166,667 = \mathbf{\$233,333}$$

2026:

$$\text{Revenue} = \$5,000,000 - \$4,000,000 = \$1,000,000$$

$$\text{Gross Profit} = \$1,000,000 - \$900,000 = \mathbf{\$100,000}$$

Situation 1 - Revenue Recognized Upon Completion

Year	Gross profit recognized
2024	- 0 -
2025	- 0 -
2026	<u>\$500,000</u>
Total gross profit	<u>\$500,000</u>

Situation 2 - Revenue Recognized Over Time

	2024	2025	2026
Contract price	<u>\$5,000,000</u>	<u>\$5,000,000</u>	<u>\$5,000,000</u>
Actual costs to date	1,500,000	2,400,000	4,800,000
Estimated costs to complete	<u>3,000,000</u>	<u>2,400,000</u>	<u>- 0 -</u>
Total estimated costs	<u>4,500,000</u>	<u>4,800,000</u>	<u>4,800,000</u>
Estimated gross profit (actual in 2026)	<u>\$ 500,000</u>	<u>\$ 200,000</u>	<u>\$ 200,000</u>

Exercise 6–23 (continued)

Gross profit (loss) recognized:

2024:

$$\text{Revenue} = \frac{\$1,500,000}{\$4,500,000} = 33.3333\% \times \$5,000,000 = \$1,666,667$$

$$\text{Gross Profit} = \$1,666,667 - \$1,500,000 = \mathbf{\$166,667}$$

Note: We can calculate gross profit directly as

$$\frac{\$1,500,000}{\$4,500,000} = 33.3333\% \times \$500,000 = \mathbf{\$166,667}$$

2025:

$$\begin{aligned} \text{Revenue} &= \frac{\$2,400,000}{\$4,800,000} = 50.0\% \times \$5,000,000 = \$2,500,000 - \$1,666,667 \\ &= \$833,333 \end{aligned}$$

$$\text{Gross Profit} = \$833,333 - \$900,000 = \mathbf{\$(66,667)}$$

Note: We can calculate gross profit directly as:

$$\frac{\$2,400,000}{\$4,800,000} = 50.0\% \times \$200,000 = \$100,000 - \$166,667 = \mathbf{\$(66,667)}$$

2026:

$$\text{Revenue} = \$5,000,000 - \$2,500,000 = \$2,500,000$$

$$\text{Gross Profit} = \$2,500,000 - \$2,400,000 = \mathbf{\$100,000}$$

Situation 2 - Revenue Recognized Upon Completion

Year	Gross profit recognized
2024	- 0 -
2025	- 0 -
2026	<u>\$200,000</u>
Total gross profit	<u>\$200,000</u>

Exercise 6–23 (continued)

Situation 3 - Revenue Recognized Over Time

	2024	2025	2026
Contract price	<u>\$5,000,000</u>	<u>\$5,000,000</u>	<u>\$5,000,000</u>
Actual costs to date	1,500,000	3,600,000	5,200,000
Estimated costs to complete	<u>3,000,000</u>	<u>1,500,000</u>	<u>-0-</u>
Total estimated costs	<u>4,500,000</u>	<u>5,100,000</u>	<u>5,200,000</u>
Estimated gross profit (loss) (actual in 2026)	<u>\$ 500,000</u>	<u>\$ (100,000)</u>	<u>\$ (200,000)</u>

Gross profit (loss) recognized:

2024:

$$\text{Revenue} = \frac{\$1,500,000}{\$4,500,000} = 33.3333\% \times \$5,000,000 = \$1,666,667$$

$$\text{Gross Profit} = \$1,666,667 - \$1,500,000 = \mathbf{\$166,667}$$

Note: can calculate gross profit directly as

$$\frac{\$1,500,000}{\$4,500,000} = 33.3333\% \times \$500,000 = \mathbf{\$166,667}$$

2025:

$$\text{Overall loss of } \$5,000,000 - \$5,100,000 = \$(100,000)$$

$$\text{Gross profit} = \$(100,000) - \$166,667 = \mathbf{\$(266,667)}$$

2026:

$$\text{Overall loss of } \$5,000,000 - \$5,200,000 = \$(200,000)$$

$$\text{Gross profit} = \$(200,000) - \$(100,000) = \mathbf{\$(100,000)}$$

Exercise 6–23 (continued)

2025:

$$\text{Revenue} = \frac{\$3,500,000}{\$4,375,000} = 80\% \times \$5,000,000 = \$4,000,000 - \$625,000 = \$3,375,000$$

$$\text{Gross Profit} = \$3,375,000 - \$3,000,000 = \mathbf{\$375,000}$$

Note: can calculate gross profit directly as

$$\frac{\$3,500,000}{\$4,375,000} = 80.0\% \times \$625,000 = \$500,000 - \$125,000 = \mathbf{\$375,000}$$

2026:

$$\text{Revenue} = \$5,000,000 - \$4,000,000 = \$1,000,000$$

$$\text{Gross Profit} = \$1,000,000 - \$1,000,000 = \mathbf{\$ - 0 -}$$

Situation 4 - Revenue Recognized Upon Completion

Year	Gross profit recognized
2024	- 0 -
2025	- 0 -
2026	<u>\$500,000</u>
Total gross profit	<u>\$500,000</u>

Situation 5 - Revenue Recognized Over Time

	2024	2025	2026
Contract price	<u>\$5,000,000</u>	<u>\$5,000,000</u>	<u>\$5,000,000</u>
Actual costs to date	500,000	3,500,000	4,800,000
Estimated costs to complete	<u>3,500,000</u>	<u>1,500,000</u>	<u>- 0 -</u>
Total estimated costs	<u>4,000,000</u>	<u>5,000,000</u>	<u>4,800,000</u>
Estimated gross profit (actual in 2026)	<u>\$1,000,000</u>	<u>\$ - 0 -</u>	<u>\$ 200,000</u>

Exercise 6–23 (continued)

Gross profit (loss) recognized:

2024:

$$\text{Revenue} = \frac{\$ 500,000}{\$4,000,000} = 12.5\% \times \$5,000,000 = \$625,000$$

$$\text{Gross Profit} = \$625,000 - \$500,000 = \mathbf{\$125,000}$$

Note: can calculate gross profit directly as

$$\frac{\$500,000}{\$4,000,000} = 12.5\% \times \$1,000,000 = \mathbf{\$125,000}$$

$$\mathbf{2025:} \quad \$0 - \$125,000 = \mathbf{\$(125,000)}$$

$$\mathbf{2026:} \quad \$200,000 - 0 = \mathbf{\$200,000}$$

Situation 5 - Revenue Recognized Upon Completion

Year	Gross profit recognized
2024	- 0 -
2025	- 0 -
2026	<u>\$200,000</u>
Total gross profit	<u>\$200,000</u>

Exercise 6–23 (concluded)

Situation 6 - Revenue Recognized Over Time

	2024	2025	2026
Contract price	<u>\$5,000,000</u>	<u>\$5,000,000</u>	<u>\$5,000,000</u>
Actual costs to date	500,000	3,500,000	5,300,000
Estimated costs to complete	<u>4,600,000</u>	<u>1,700,000</u>	<u>- 0 -</u>
Total estimated costs	<u>5,100,000</u>	<u>5,200,000</u>	<u>5,300,000</u>
Estimated gross profit (loss) (actual in 2026)	<u>\$ (100,000)</u>	<u>\$ (200,000)</u>	<u>\$ (300,000)</u>

Gross profit (loss) recognized:

2024: \$(100,000)

2025: \$(200,000) – \$(100,000) = \$(100,000)

2026: \$(300,000) – \$(200,000) = \$(100,000)

Situation 6 - Revenue Recognized Upon Completion

Year	Gross profit (loss) recognized
2024	\$(100,000)
2025	(100,000)
2026	<u>(100,000)</u>
Total project loss	<u>\$(300,000)</u>

Exercise 6–24

Requirement 1

Construction in progress = Costs incurred + Profit recognized

$$\$100,000 = ? + \$20,000$$

Actual costs incurred in 2024 = **\$80,000**

Requirement 2

Billings = Cash collections + Accounts receivable

$$\$94,000 = ? + \$30,000$$

Cash collections in 2024 = **\$64,000**

Requirement 3

Let A = Actual cost incurred + Estimated cost to complete

$$\frac{\text{Actual cost incurred}}{A} \times (\text{Contract price} - A) = \text{Profit recognized}$$

$$\frac{\$80,000}{A} (\$1,600,000 - A) = \$20,000$$

$$\$128,000,000,000 - \$80,000A = \$20,000A$$

$$\$100,000A = \$128,000,000,000$$

$$A = \$1,280,000$$

Estimated cost to complete = $\$1,280,000 - \$80,000 =$ **\$1,200,000**

Exercise 6–24 (concluded)

Requirement 4

$$\frac{\$80,000}{\$1,280,000} = \mathbf{6.25\%}$$

Alternatively, Requirement 4 can be answered as follows:

Contract price	\$1,600,000
Less: Total estimated cost	<u>1,280,000</u>
Estimated gross profit	<u>\$ 320,000</u>

Proportion of gross profit recognized to date:

$$\frac{\$20,000}{\$320,000} = \mathbf{6.25\%}$$

PROBLEMS

Problem 6-1

Requirement 1

- a. Number of performance obligations in the contract: **2**.

The unlimited access to facilities for one year is one performance obligation. Because the discount voucher provides a material right to the customer (a 25% discount for yoga classes rather than a 10% discount) and that right is not one the customer would receive had it not bought the one-year new membership, the option to buy yoga classes at a discount is a second performance obligation. The discount voucher is *capable of being distinct* because it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of providing access to Fit & Slim's facilities, and the seller's role is not to integrate and customize them to create one product or service. So, the discount coupon qualifies as a performance obligation.

- b. To allocate the contract price to the performance obligations, we should first consider that Fit & Slim would offer a 10% discount on the yoga classes to all customers as part of its normal promotion strategy. So, a 25% discount provides a customer with an incremental value of 15% (25% – 10%). Thus, the estimated stand-alone selling price of the voucher provided by Fit & Slim is \$30 (\$500 initial price of the classes × 15% incremental discount × 40% likelihood of exercising the option).

F&S's estimated stand-alone selling price of the discount option is:

Value of the yoga discount voucher:

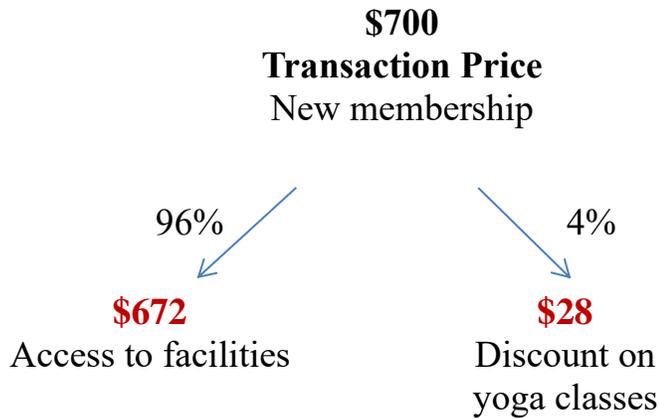
(25% discount – 10% normal discount) × \$500 =	\$ 75
Estimated redemption	× 40%
Stand-alone selling price of yoga discount voucher:	\$ 30
Stand-alone selling price of new gym membership:	<u>720</u>
Total of stand-alone prices	<u>\$750</u>

Problem 6-1 (continued)

F&S must identify each performance obligation's share of the sum of the stand-alone selling prices of all deliverables:

Yoga discount voucher:	$\frac{\$30}{\$30 + \$720}$	= 4%
Facilities access:	$\frac{\$720}{\$30 + \$720}$	= 96%
		100%

F&S then allocates the total selling price based on stand-alone selling prices, as follows:



The journal entry to record the sale is:

Cash	700	
Deferred revenue		672
Deferred revenue – coupons		28

Problem 6-1 (concluded)

Requirement 2

- a. Number of performance obligations in the contract: **1**.

The access to the gym for 50 visits is one performance obligation. The option to pay \$15 for additional visits does not constitute a material right because it requires the same fee as would normally be paid by nonmembers. Therefore, it is not a performance obligation in the contract.

(Note: It could be argued that the coupon book actually includes 50 performance obligations – one for each visit to the gym. That would end up producing a very similar accounting outcome, as the \$500 cost of the book would be allocated to the 50 visits with revenue recognized for each visit.)

- b. Since the option to visit on additional days is not a performance obligation, F&S should not allocate any of the contract price to the option. Therefore, the entire \$500 payment is allocated to the 50 visits associated with the coupon book (“coupons”).

c.	Cash	500	
	Deferred revenue – coupons		500

Problem 6–2

Requirement 1

Number of performance obligations in the contract: **2**.

Delivery of a Protab computer is one performance obligation.

The option to purchase a Probook at a 50% discount is a second performance obligation because it provides a material right to the customer that the customer would not receive had it not bought the Protab. The option, represented by the coupon, is *capable of being distinct* because it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of delivering a Protab computer, and the seller's role is not to integrate and customize them to create one product. So, the discount coupon qualifies as a performance obligation.

The 6-month quality assurance warranty is not a performance obligation. It is not sold separately and is simply a cost to assure that the product is of good quality. The seller will estimate and recognize an expense and related contingent warranty liability in the period of sale. Accounting for warranties is covered in Chapter 13.

The coupon providing an option to purchase an extended warranty does not provide a material right to the customer because the extended warranty costs the same whether or not it is purchased along with the Protab. Therefore, that option does not constitute a performance obligation within the contract to purchase a Protab package.

Problem 6-2 (continued)

Requirement 2

Allocation of purchase price to performance obligations:

Performance obligation:	Stand-alone selling price of the performance obligation:	Percentage of the sum of the stand-alone selling prices of the performance obligations:	Allocation of total transaction price to each performance obligation:
Protab tablet	\$76,000,000 ¹	95% ³	\$74,100,000⁵
Option to purchase a Probook	<u>4,000,000²</u>	<u>5%⁴</u>	<u>3,900,000⁶</u>
Total	\$80,000,000	100.00%	\$78,000,000

¹ \$76,000,000 = \$760/unit × 100,000 units.

² \$4,000,000 = 50% discount × \$400 normal Probook price × 100,000 discount coupons issued × 20% probability of redemption.

³ 95% = \$76,000,000 ÷ \$80,000,000

⁴ 5% = \$4,000,000 ÷ \$80,000,000

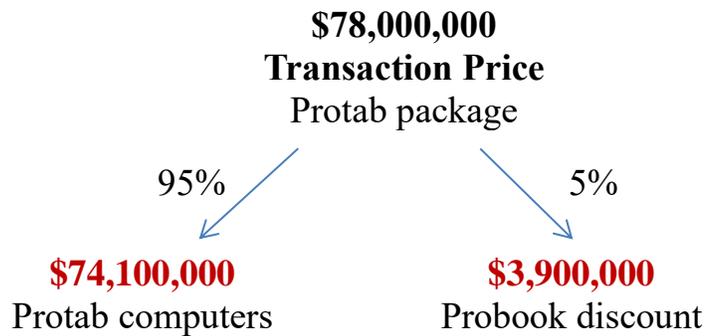
⁵ \$74,100,000 = 95.00% × (\$780 × 100,000 units)

⁶ \$3,900,000 = 5.00% × (\$780 × 100,000 units)

Problem 6-2 (concluded)

Requirement 3

Creative then allocates the total selling price based on stand-alone selling prices, as follows:



The journal entry to record the sale is:

Cash ($\$780 \times 100,000$ units)	78,000,000	
Sales revenue		74,100,000
Deferred revenue – coupons		3,900,000

Problem 6–3

Requirement 1

Number of performance obligations in the contract: **3**.

Delivery of a Protab computer is one performance obligation.

The option to purchase a Probook at a 50% discount is a second performance obligation because it provides a material right to the customer that the customer would not receive had it not bought the Protab. The option, represented by the coupon, is *capable of being distinct* because it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligations in the contract, so the discount coupon qualifies as a performance obligation.

The 6-month quality assurance warranty is not a performance obligation. It is not sold separately and is simply a cost to assure that the product is of good quality. The seller will estimate and recognize an expense and related contingent warranty liability in the period of sale. Accounting for warranties is covered in Chapter 13.

The option to purchase the extended warranty provides a material right to the customer, as the extended warranty costs less when purchased with the coupon that was included in the Protab Package (\$50) than it does when purchased separately (\$75), so it is a third performance obligation. The option is *capable of being distinct* because it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligations in the contract, and the seller's role is not to integrate and customize them to create one product or service. So, the discount option qualifies as a performance obligation.

Problem 6-3 (continued)

Requirement 2

Allocation of purchase price to performance obligations:

Performance obligation:	Stand-alone selling price of the performance obligation:	Percentage of the sum of the stand-alone selling prices of the performance obligations (to two decimal places):	Allocation of total transaction price to each performance obligation:
Protab tablet	\$76,000,000 ¹	93.83% ⁴	\$73,187,400⁷
Option to purchase Probook	4,000,000 ²	4.94% ⁵	3,853,200⁸
Option to purchase extended warranty	<u>1,000,000³</u>	<u>1.23%⁶</u>	<u>959,400⁹</u>
Total	\$81,000,000	100.00%	\$78,000,000

¹ \$76,000,000 = \$760/unit × 100,000 units.

² \$4,000,000 = 50% discount × \$400 normal Probook price × 100,000 discount coupons issued × 20% probability of redemption.

³ \$1,000,000 = (\$75 price of warranty sold separately minus \$50 price of warranty sold at time of software purchase) × 100,000 units sold × 40% probability of exercise of option.

⁴ 93.83% = \$76,000,000 ÷ \$81,000,000

⁵ 4.94% = \$4,000,000 ÷ \$81,000,000

⁶ 1.23% = \$1,000,000 ÷ \$81,000,000

⁷ \$73,187,400 = 93.83% × (\$780 × 100,000 units)

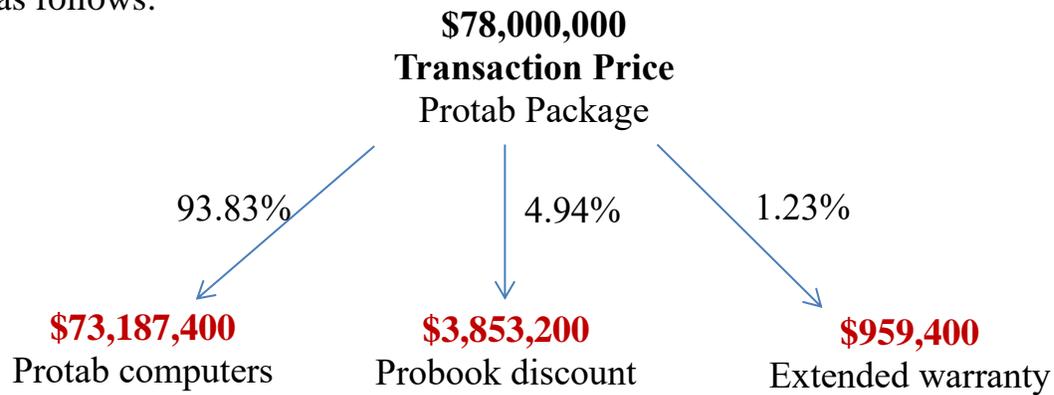
⁸ \$3,853,200 = 4.94% × (\$780 × 100,000 units)

⁹ \$959,400 = 1.23% × (\$780 × 100,000 units)

Problem 6-3 (concluded)

Requirement 3

Creative then allocates the total selling price based on stand-alone selling prices, as follows:



The journal entry to record the sale is:

Cash ($\$780 \times 100,000$ units)	78,000,000	
Sales revenue		73,187,400
Deferred revenue – coupons		3,853,200
Deferred revenue – extended warranties		959,400

Problem 6-4

Requirement 1

The delivery of Supply Club's normal products is one performance obligation. The promise to redeem loyalty points for discounts on purchases represents a material right to customers that they would not receive had they not bought Supply Club's products, so that the discount provided upon redemption of loyalty points represents a second performance obligation. The loyalty program provides customers with a discount option on future purchases. That option is *capable of being distinct* because it could be sold or provided separately, and it is *separately identifiable*, as it is not highly interrelated with the other performance obligation of delivering products under normal sales agreements (the customer can redeem loyalty points for future purchases). Therefore, the promise to redeem loyalty points qualifies as a performance obligation.

Because there are two performance obligations associated with a single transaction price (\$135,000), the transaction price must be allocated between the two performance obligations on the basis of stand-alone prices.

Supply Club's estimated stand-alone selling price of the loyalty points is:

Value of the loyalty points:		
125,000 points × \$0.20 discount per point =	\$ 25,000	
Estimated redemption	<u> </u> × 60%	
Stand-alone selling price of loyalty points:	\$ 15,000	
Stand-alone selling price of purchased products:	<u>135,000</u>	
Total of stand-alone prices	<u>\$150,000</u>	

Supply Club must identify each performance obligation's share of the sum of the stand-alone selling prices of all deliverables:

Loyalty points:	$\frac{\$15,000}{\$15,000 + \$135,000}$	= 10%
Purchased products:	$\frac{\$135,000}{\$15,000 + \$135,000}$	= 90%
		100%

Problem 6-4 (concluded)

When deferred revenue associated with the loyalty points was first recognized, a total of \$13,500 was assigned to the points, given an expectation that 75,000 points would be redeemed. Therefore, each redeemed point results in recognition of $\$13,500/75,000$ or \$0.18/point.

When 60,000 points are redeemed, they reduce the cash collected (now or in the future) by 20%. Thus, total cash collected will be $\$60,000 \times 80\% = \$48,000$. 75%, or \$36,000, is collected immediately, and another \$12,000 is collected when the receivable is collected. Thus, total revenue recognized upon sale is $\$36,000$ (associated with cash sales) + $\$12,000$ (associated with A/R) + $\$10,800$ (deferred revenue associated with loyalty point redemption), totaling \$58,800.

Problem 6–5

Requirement 1

The contract requires 6 payments of \$20,000, plus or minus \$10,000 at the end of the contract. So the contract will provide either $[(6 \times \$20,000) + \$10,000] = \$130,000$, or $[(6 \times \$20,000) - \$10,000] = \$110,000$.

Revis would estimate the expected value of the transaction price as follows:

Possible Prices	Probability	Expected Consideration
\$130,000 $([\$20,000 \times 6] + \$10,000)$	80%	\$104,000
\$110,000 $([\$20,000 \times 6] - \$10,000)$	20%	<u>22,000</u>
Expected value of contract price at inception		\$126,000

Each month Revis will recognize \$21,000 (equal to $\$126,000 \div 6$) of revenue, recording the following journal entry:

Cash	20,000	
Bonus receivable	1,000	
Service revenue		21,000

Requirement 2

After six months the bonus receivable will have accumulated to **\$6,000** (equal to $6 \times \$1,000$). If Revis receives the bonus, it will record the following entry:

Cash	10,000	
Bonus receivable		6,000
Service revenue		4,000

Problem 6-5 (concluded)

Requirement 3

If Revis pays the penalty, it will record the following entry:

Service revenue	16,000
Bonus receivable	6,000
Cash	10,000

Problem 6–6

Requirement 1

Cash	80,000	
Deferred revenue		80,000

Because Super Rise believes that unexpected delays are likely and that it will not earn the \$40,000 bonus, Super Rise is not likely to receive the bonus. Thus, the \$40,000 is not included in the transaction price, and only the fixed payment of \$80,000 is recognized as deferred revenue.

Requirement 2

Deferred revenue ($\$80,000 \div 10$)	8,000	
Bonus receivable ($\$40,000 \div 10$)	4,000	
Service revenue		12,000

Super Rise recognizes revenue of \$12,000 associated in the month of January. Because Super Rise believes it is likely to receive the bonus, it will estimate the transaction price to be \$120,000 (equal to \$80,000 fixed payment + \$40,000 bonus), and will recognize 1/10 of that amount each month.

Requirement 3

Deferred revenue ($\$80,000 \div 10$)	8,000	
Bonus receivable [$(\$40,000 \div 10) \times 5$]	20,000	
Service revenue		28,000

Super Rise recognizes revenue of \$8,000 in each month, including May, based on the original transaction of \$80,000 (equal to $\$80,000 \div 10$ months). However, no bonus receivable had been recognized prior to May because unexpected delays were considered likely and thus no bonus was expected. In May, Super Rise concludes it is likely to receive the bonus, so it will revise the transaction price to \$120,000 (equal to \$80,000 fixed payment + \$40,000 contingent bonus). This means Super Rise must record additional revenue of \$20,000 to adjust revenue to the appropriate amount [$(\$40,000 \text{ bonus receivable} \div 10 \text{ months}) \times 5 \text{ months}$], and recognize a receivable for that amount.

Problem 6–7

Requirement 1

Cash	80,000
Deferred revenue	80,000

Because Super Rise has high uncertainty about its bonus estimate, it can't argue that it is probable that it won't have to reverse (adjust downward) a significant amount of revenue in the future because of a change in its estimate. Therefore, the \$40,000 is not included in the transaction price, and only the fixed payment of \$80,000 is recognized as deferred revenue.

Requirement 2

Deferred revenue ($\$80,000 \div 10$)	8,000
Bonus receivable [$(\$40,000 \div 10) \times 5$]	20,000
Service revenue	28,000

Super Rise recognizes revenue of \$8,000 in the month of May based on the original transaction of \$80,000 (equal to $\$80,000 \div 10$ months). In addition, now that Super Rise can make an accurate estimate, it can argue that it is probable that it won't have to reverse (adjust downward) a significant amount of revenue in the future because of a change in its estimate. Therefore, Super Rise will revise the transaction price to \$120,000 (equal to \$80,000 fixed payment + \$40,000 contingent bonus). This means Super Rise must record additional revenue of \$20,000 to adjust revenue to the appropriate amount [$(\$40,000 \text{ bonus receivable} \div 10 \text{ months}) \times 5 \text{ months}$], and recognize a receivable for that amount.

Problem 6-8

Requirement 1

At the contract's inception, Velocity calculates the transaction price to be the expected value of the two possible eventual prices:

Possible Prices	Possible Probabilities	Expected Consideration
\$500,000 ($[\$60,000 \times 8] + \$20,000$)	80%	\$400,000
\$460,000 ($[\$60,000 \times 8] - \$20,000$)	20%	<u>92,000</u>
Expected value at contract inception:		\$492,000

Because its consulting services are provided evenly over the eight months, Velocity will recognize revenue of **\$61,500** (equal to $\$492,000 \div 8$ months). Because Velocity is guaranteed to receive only \$60,000 per month (\$1,500 less than the revenue recognized), it will recognize a bonus receivable of \$1,500 in each month to reflect the expected value of the bonus amount to be received at the end of the contract. Therefore, Velocity's journal entry to record the revenue each month for the first four months is as follows:

Cash	60,000	
Bonus receivable	1,500	
Service revenue		61,500

Problem 6–8 (continued)

Requirement 2

By the end of the fourth month, the bonus receivable account would have a balance of **\$6,000** (equal to $4 \times \$1,500$), equal to half of the expected value of the bonus of \$12,000 (equal to $\$492,000 - [8 \times \$60,000]$). At the start of the fifth month, the estimated likelihood of receiving the bonus is revised so the estimated transaction price decreases:

Possible Prices	Probabilities	Expected Consideration
\$500,000 ($[\$60,000 \times 8] + \$20,000$)	60%	\$300,000
\$460,000 ($[\$60,000 \times 8] - \$20,000$)	40%	<u>184,000</u>
Transaction price at start of fifth month:		\$484,000

So, after four months, the bonus receivable account should have a balance of \$2,000, which is half of the new expected value of the bonus of **\$4,000** (equal to $\$484,000 - [8 \times \$60,000]$). Because the bonus receivable account was increased to \$6,000 in the first four months, an adjustment of \$4,000 is needed to reduce the bonus receivable down to \$2,000:

Service revenue	4,000
Bonus receivable	4,000

This entry reduces the bonus receivable from \$6,000 to \$2,000, with the offsetting debit being a reduction in revenue. Over the remaining four months, the bonus receivable will increase by \$500 each month, accumulating to \$4,000 by the end of the contract.

Problem 6–8 (concluded)

Requirement 3

Because services are provided evenly over the eight months, Velocity would recognize revenue of **\$60,500** (equal to $\$484,000 \div 8$ months) in each of months five through eight. Because Velocity received \$60,000 per month (\$500 less than the revenue recognized), Velocity would recognize a bonus receivable of \$500 each month to reflect the additional service revenue in excess of its unconditional right to \$60,000. The journal entry would be:

Cash	60,000	
Bonus receivable	500	
Service revenue		60,500

Requirement 4

At the end of contract, Velocity learns that it will receive the bonus of \$20,000. It already has recognized revenue of \$4,000 associated with the bonus. Therefore, when Velocity receives the cash bonus, it will recognize additional revenue of \$16,000.

Cash	20,000	
Bonus receivable	4,000	
Service revenue		16,000

Problem 6-9

Requirement 1

The *FASB Accounting Standards Codification*[®] represents the single source of authoritative U.S. generally accepted accounting principles. Regarding accounting for sales-based royalties from licenses, the appropriate citation is:

FASB ASC 606–10–55–65: “Revenue from Contracts with Customers–Overall–Implementation Guidance and Illustrations–Sales-Based or Usage-Based Royalties.”

That citation requires that both of the following two events have occurred:

1. The sales that utilize the intellectual property have occurred.
2. The performance obligation to which the royalty has been allocated has been satisfied.

Therefore, Tran can’t recognize revenue for sales-based royalties on the Lyon license until sales have actually occurred.

Requirement 2

If Tran accounts for the Lyon license of functional intellectual property as a right of use that is conveyed on April 1, 2024, Tran can recognize revenue of **\$500,000** on that date, because that is the date upon which Tran transfers to Lyon the right to use its intellectual property. The journal entry would be:

Cash	500,000	
License revenue		500,000

Requirement 3

Tran recognizes revenue for sales-based royalties in the period in which uncertainty is resolved. Tran is due **\$1,000,000** of royalties on Lyon’s sales in 2024, so it should recognize revenue in that amount. The journal entry would be:

Cash	1,000,000	
License revenue		1,000,000

Problem 6–9 (concluded)

Requirement 4

If Tran accounts for the Lyon license of symbolic intellectual property as an access right for the period from April 1, 2024, through March 31, 2029, Tran cannot recognize any revenue on April 1, 2024, because it fulfills its performance obligation over the access period and no time has yet passed. Instead, Tran must recognize deferred revenue of **\$500,000**. The journal entry would be:

Cash	500,000	
Deferred revenue		500,000

As of December 31, 2024, Tran has partially fulfilled its performance obligation to provide access to its symbolic intellectual property. Given that the access right covers a five-year period (from April 1, 2024, through March 31, 2029), and Tran provided access for nine months of 2024 (from April 1, 2024, through December 31, 2024), Tran has provided 15% [equal to $9 \div (5 \times 12)$] of the access right during 2024, and should recognize $15\% \times \$500,000 = \$75,000$ of revenue. Tran also should recognize revenue for the \$1,000,000 of royalties arising from Lyon’s sales in 2024. So, total revenue recognized in 2024 is $\$75,000 + \$1,000,000 =$ **\$1,075,000**. The journal entry would be:

Cash	1,000,000	
Deferred revenue	75,000	
License revenue		1,075,000

Problem 6–10

Requirement 1

	2024	2025	2026
Contract price	<u>\$10,000,000</u>	<u>\$10,000,000</u>	<u>\$10,000,000</u>
Actual costs to date	2,400,000	6,000,000	8,200,000
Estimated costs to complete	<u>5,600,000</u>	<u>2,000,000</u>	<u>- 0 -</u>
Total estimated costs	<u>8,000,000</u>	<u>8,000,000</u>	<u>8,200,000</u>
Estimated gross profit (loss) (actual in 2026)	<u>\$ 2,000,000</u>	<u>\$ 2,000,000</u>	<u>\$ 1,800,000</u>

Revenue recognition:

$$\text{2024: } \frac{\$2,400,000}{\$8,000,000} = 30.0\% \times \$10,000,000 = \mathbf{\$3,000,000}$$

$$\text{2025: } \frac{\$6,000,000}{\$8,000,000} = 75.0\% \times \$10,000,000 - \$3,000,000 = \mathbf{\$4,500,000}$$

$$\text{2026: } \$10,000,000 - \$7,500,000 = \mathbf{\$2,500,000}$$

Gross profit (loss) recognition:

$$\text{2024: } \$3,000,000 - \$2,400,000 = \mathbf{\$600,000}$$

$$\text{2025: } \$4,500,000 - \$3,600,000 = \mathbf{\$900,000}$$

$$\text{2026: } \$2,500,000 - \$2,200,000 = \mathbf{\$300,000}$$

Note: Also can calculate gross profit directly using the percentage of completion:

$$\text{2024: } \frac{\$2,400,000}{\$8,000,000} = 30.0\% \times \$2,000,000 = \mathbf{\$600,000}$$

$$\text{2025: } \frac{\$6,000,000}{\$8,000,000} = 75.0\% \times \$2,000,000 = \$1,500,000 - \$600,000 = \mathbf{\$900,000}$$

$$\text{2026: } \$1,800,000 - \$1,500,000 = \mathbf{\$300,000}$$

Problem 6–10 (continued)

Requirement 2

	2024	2025	2026
Construction in progress	2,400,000	3,600,000	2,200,000
Cash, materials, etc.	2,400,000	3,600,000	2,200,000
To record construction costs			
Accounts receivable	2,000,000	4,000,000	4,000,000
Billings on construction contract	2,000,000	4,000,000	4,000,000
To record progress billings			
Cash	1,800,000	3,600,000	4,600,000
Accounts receivable	1,800,000	3,600,000	4,600,000
To record cash collections			
Construction in progress (gross profit)	600,000	900,000	300,000
Cost of construction (cost incurred)	2,400,000	3,600,000	2,200,000
Revenue from long-term contracts	3,000,000	4,500,000	2,500,000
To record gross profit			

Problem 6–10 (continued)

Requirement 3

Balance Sheet	2024		2025
<i>Current assets:</i>			
Accounts receivable		\$ 200,000	\$600,000
Construction in progress	\$3,000,000		\$7,500,000
Less: Billings	<u>(2,000,000)</u>	<u>(6,000,000)</u>	
CIP in excess of billings		1,000,000	1,500,000

Note: Construction in progress in excess of billings is a contract asset; Billings in excess of construction in progress is a contract liability.

Problem 6–10 (continued)

Requirement 4

	2024	2025	2026
Costs incurred during the year	\$2,400,000	\$3,800,000	\$3,200,000
Estimated costs to complete as of year-end	5,600,000	3,100,000	-
	2024	2025	2026
Contract price	<u>\$10,000,000</u>	<u>\$10,000,000</u>	<u>\$10,000,000</u>
Actual costs to date	2,400,000	6,200,000	9,400,000
Estimated costs to complete	<u>5,600,000</u>	<u>3,100,000</u>	<u>- 0 -</u>
Total estimated costs	<u>8,000,000</u>	<u>9,300,000</u>	<u>9,400,000</u>
Estimated gross profit (actual in 2026)	<u>\$ 2,000,000</u>	<u>\$ 700,000</u>	<u>\$ 600,000</u>

Revenue recognition:

$$\text{2024: } \frac{\$2,400,000}{\$8,000,000} = 30.0\% \times \$10,000,000 = \mathbf{\$3,000,000}$$

$$\text{2025: } \frac{\$6,200,000}{\$9,300,000} = 66.6667\% \times \$10,000,000 - \$3,000,000 = \mathbf{\$3,666,667}$$

$$\text{2026: } \$10,000,000 - \$6,666,667 = \mathbf{\$3,333,333}$$

Gross profit (loss) recognition:

$$\text{2024: } \$3,000,000 - \$2,400,000 = \mathbf{\$600,000}$$

$$\text{2025: } \$3,666,667 - \$3,800,000 = \mathbf{\$(133,333)}$$

$$\text{2026: } \$3,333,333 - \$3,200,000 = \mathbf{\$133,333}$$

Problem 6–10 (continued)

Note: Also can calculate gross profit directly using the percentage of completion:

$$\text{2024: } \frac{\$2,400,000}{\$8,000,000} = 30.0\% \times \$2,000,000 = \mathbf{\$600,000}$$

$$\text{2025: } \frac{\$6,200,000}{\$9,300,000} = 66.6667\% \times \$700,000 = \$466,667 - \$600,000 = \mathbf{\$(133,333)}$$

$$\text{2026: } \$600,000 - \$466,667 = \mathbf{\$133,333}$$

Requirement 5

	2024	2025	2026
Costs incurred during the year	\$2,400,000	\$3,800,000	\$3,900,000
Estimated costs to complete as of year-end	5,600,000	4,100,000	-
	2024	2025	2026
Contract price	<u>\$10,000,000</u>	<u>\$10,000,000</u>	<u>\$10,000,000</u>
Actual costs to date	2,400,000	6,200,000	10,100,000
Estimated costs to complete	<u>5,600,000</u>	<u>4,100,000</u>	<u>- 0 -</u>
Total estimated costs	<u>8,000,000</u>	<u>10,300,000</u>	<u>10,100,000</u>
Estimated gross profit (loss) (actual in 2026)	<u>\$ 2,000,000</u>	<u>\$ (300,000)</u>	<u>\$ (100,000)</u>

Revenue recognition:

$$\text{2024: } \frac{\$2,400,000}{\$8,000,000} = 30.0\% \times \$10,000,000 = \mathbf{\$3,000,000}$$

$$\text{2025: } \frac{\$6,200,000}{\$10,300,000} = 60.19417\% \times \$10,000,000 - \$3,000,000 = \mathbf{\$3,019,417}$$

$$\text{2026: } \$10,000,000 - \$6,019,417 = \mathbf{\$3,980,583}$$

Problem 6–10 (concluded)

Gross profit (loss) recognition:

2024: $\$3,000,000 - \$2,400,000 = \mathbf{\$600,000}$

2025: $\$(300,000) - \$600,000 = \mathbf{\$(900,000)}$

2026: $\$(100,000) - \$(300,000) = \mathbf{\$200,000}$

Problem 6–11

Requirement 1

Year	Revenue recognized	Gross profit recognized
2024	-0-	- 0 -
2025	-0-	- 0 -
2026	<u>\$10,000,000</u>	<u>\$1,800,000</u>
Total	<u>\$10,000,000</u>	<u>\$1,800,000</u>

Requirement 2

	2024	2025	2026
Construction in progress	2,400,000	3,600,000	2,200,000
Cash, materials, etc.	2,400,000	3,600,000	2,200,000
To record construction costs			
Accounts receivable	2,000,000	4,000,000	4,000,000
Billings on construction contract	2,000,000	4,000,000	4,000,000
To record progress billings			
Cash	1,800,000	3,600,000	4,600,000
Accounts receivable	1,800,000	3,600,000	4,600,000
To record cash collections			
Construction in progress (gross profit)			1,800,000
Cost of construction (costs incurred)			8,200,000
Revenue from long-term contracts (contract price)			10,000,000
To record gross profit			

Problem 6–11 (concluded)

Requirement 3

Balance Sheet	2024	2025
Current assets:		
Accounts receivable	\$ 200,000	\$ 600,000
Construction in progress	\$2,400,000	\$6,000,000
Less: Billings	<u>(2,000,000)</u>	<u>(6,000,000)</u>
CIP in excess of billings	400,000	- 0 -

Note: Construction in progress in excess of billings is a contract asset.

Requirement 4

	2024	2025	2026
Costs incurred during the year	\$2,400,000	\$3,800,000	\$3,200,000
Estimated costs to complete as of year-end	5,600,000	3,100,000	-

Year	Revenue recognized	Gross profit recognized
2024	-0-	- 0 -
2025	-0-	- 0 -
2026	<u>\$10,000,000</u>	<u>\$600,000</u>
Total	<u>\$10,000,000</u>	<u>\$600,000</u>

Requirement 5

	2024	2025	2026
Costs incurred during the year	\$2,400,000	\$3,800,000	\$3,900,000
Estimated costs to complete as of year-end	5,600,000	4,100,000	-

Year	Revenue recognized	Gross profit (loss) recognized
2024	-0-	- 0 -
2025	-0-	\$(300,000)
2026	<u>\$10,000,000</u>	<u>200,000</u>
Total	<u>\$10,000,000</u>	<u>\$(100,000)</u>

Problem 6–12

Requirement 1

	2024	2025	2026
Contract price	<u>\$4,000,000</u>	<u>\$4,000,000</u>	<u>\$4,000,000</u>
Actual costs to date	350,000	2,500,000	4,250,000
Estimated costs to complete	<u>3,150,000</u>	<u>1,700,000</u>	<u>- 0 -</u>
Total estimated costs	<u>3,500,000</u>	<u>4,200,000</u>	<u>4,250,000</u>
Estimated gross profit (loss) (actual in 2026)	<u>\$ 500,000</u>	<u>\$ (200,000)</u>	<u>\$ (250,000)</u>

Year	Gross profit (loss) recognized
2024	- 0 -
2025	\$(200,000)
2026	<u>(50,000)</u>
Total project loss	<u>\$(250,000)</u>

Requirement 2

Gross profit (loss) recognition:

2024: Revenue: $(10\% \times \$4,000,000) - \$350,000$ cost = **\$50,000**

2025: $\$(200,000) - \$50,000 = \mathbf{\$(250,000)}$

2026: $\$(250,000) - \$(200,000) = \mathbf{\$(50,000)}$

Requirement 3

Balance Sheet	2024	2025
<i>Current assets:</i>		
CIP (\$2,300,000*) in excess of billings (\$2,170,000)		\$ 130,000
<i>Current liabilities:</i>		
Billings (\$720,000) in excess of CIP (\$400,000)	\$ 320,000	

*Cumulative costs (\$2,500,000) less cumulative loss recognized (\$200,000) = \$2,300,000

Problem 6–13

Requirement 1

Recognizing revenue upon completion of long-term construction contracts is equivalent to recognizing revenue at the point in time at which delivery occurs. Recognizing revenue over time requires assigning a share of the project's expected revenues and costs to each construction period. The share is estimated based on the project's costs incurred each period as a percentage of the project's total estimated costs.

Requirement 2

	2024	2026
Contract price	<u>\$20,000,000</u>	<u>\$20,000,000</u>
Actual costs to date	4,000,000	13,500,000
Estimated costs to complete	<u>12,000,000</u>	<u>4,500,000</u>
Total estimated costs	<u>16,000,000</u>	<u>18,000,000</u>
Estimated gross profit	<u>\$ 4,000,000</u>	<u>\$ 2,000,000</u>

- a. **Revenue recognition:** If revenue is recognized upon project completion, Citation would not report any revenue in the 2024 or 2025 income statements.
- b. **Gross profit recognition:**
If revenue is recognized upon project completion, Citation would not report gross profit until the project is completed. Citation would have to report an overall gross loss on the contract in whatever period it first revises the estimates to determine that an overall loss will eventually occur. Citation never estimates the Altamont contract will earn a gross loss, so never has to recognize one.

Problem 6–13 (continued)

c.

Balance Sheet At December 31, 2024	
<i>Current assets:</i>	
Accounts receivable	\$ 200,000
CIP (\$4,000,000*) in excess of billings (\$2,000,000)	2,000,000

* If revenue is recognized upon project completion, this account would only include costs of \$4,000,000

Requirement 3

	2024	2025
Contract price	<u>\$20,000,000</u>	<u>\$20,000,000</u>
Actual costs to date	4,000,000	13,500,000
Estimated costs to complete	<u>12,000,000</u>	<u>4,500,000</u>
Total estimated costs	<u>16,000,000</u>	<u>18,000,000</u>
Estimated gross profit	<u>\$ 4,000,000</u>	<u>\$ 2,000,000</u>

a. Revenue recognition:

2024:

$$\text{Revenue: } \frac{\$ 4,000,000}{\$16,000,000} = 25\% \times \$20,000,000 = \mathbf{\$5,000,000}$$

2025:

$$\begin{array}{r} \text{Revenue: } \frac{\$13,500,000}{\$18,000,000} = 75\% \times \$20,000,000 = \$15,000,000 \\ \text{Less: 2024 revenue} \quad \underline{5,000,000} \\ \text{2025 revenue} \quad \quad \quad \$10,000,000 \end{array}$$

b. Gross profit recognition:

$$\mathbf{2024:} \text{ Gross Profit: } \$5,000,000 - \$4,000,000 = \mathbf{\$1,000,000}$$

$$\mathbf{2025:} \text{ Gross Profit: } \$10,000,000 - \$9,500,000 = \mathbf{\$500,000}$$

Problem 6–13 (continued)

c.

Balance Sheet At December 31, 2024	
<i>Current assets:</i>	
Accounts receivable	\$ 200,000
CIP (\$5,000,000*) in excess of billings (\$2,000,000)	3,000,000

* Costs (\$4,000,000) + profit (\$1,000,000)

Requirement 4

	2024	2025
Contract price	<u>\$20,000,000</u>	<u>\$20,000,000</u>
Actual costs to date	4,000,000	13,500,000
Estimated costs to complete	<u>12,000,000</u>	<u>9,000,000</u>
Total estimated costs	<u>16,000,000</u>	<u>22,500,000</u>
Estimated gross profit	<u>\$ 4,000,000</u>	<u>(\$ 2,500,000)</u>

a. Revenue recognition:

$$\begin{aligned}\text{Total revenue recognized to date} &= (\text{percentage complete})(\text{total revenue}) \\ &= (\$13,500,000 \div \$22,500,000) \times (\$20,000,000) \\ &= (60\%) \times (\$20,000,000) \\ &= \$12,000,000\end{aligned}$$

$$\begin{aligned}\text{Revenue recognized in 2025} &= \text{total} - \text{revenue recognized in prior periods} \\ &= \$12,000,000 - \$5,000,000 = \mathbf{\$7,000,000}\end{aligned}$$

b. Gross profit recognition:

2025: Overall loss of (\$2,500,000) – previously recognized gross profit of \$1,000,000 = **\$(3,500,000)**.

Problem 6–13 (continued)

c.

Balance Sheet At December 31, 2025	
<i>Current assets:</i>	
Accounts receivable	\$ 1,600,000
<i>Current liabilities:</i>	
Billings (\$12,000,000) in excess of CIP (\$11,000,000*)	1,000,000

* 2024 costs (\$4,000,000) + 2024 profit (\$1,000,000) + 2025 costs (\$9,500,000) – 2025 loss (\$3,500,000)

Requirement 5

Citation should recognize revenue at the time of delivery, when the homes are completed and title is transferred to the buyer. Recognizing revenue over time is not appropriate in this case, because the criteria for revenue recognition over time are not met. Specifically, the customers are not consuming the benefit of the seller’s work as it is performed (criterion 1 in Illustration 5-5), the customer does not control the asset as it is created (criterion 2), and the homes have an alternative use to the seller and seller does not have the right to receive payment for progress to date (criterion 3). Until completion of the home, transfer of title does not occur and the full sales price is not received, so control of the homes has not passed from Citation to the buyers.

Requirement 6

Income statement:

Sales revenue (3 x \$600,000)	\$1,800,000
Cost of goods sold (3 x \$450,000)	<u>1,350,000</u>
Gross profit	\$ 450,000

Balance sheet:

Current assets:

Inventory (work in process)	\$2,700,000
-----------------------------	-------------

Current liabilities:

Customer deposits (or deferred revenue)	\$ 300,000*
---	-------------

$$*\$600,000 \times 10\% = \$60,000 \times 5 = \$300,000$$

DECISION MAKERS' PERSPECTIVE CASE S

Research Case 6–1

(Note: This case requires the student to reference a journal article.)

1.

Abuse	Explanation
1. Cutoff manipulation	The company either closes its books early (so some current-year revenue is postponed until next year) or leaves the books open too long (so some next-year revenue is included in the current year).
2. Deferring too much or too little revenue	The company has an arrangement under which revenue should be deferred, but it doesn't defer the revenue. Or, a company could defer too much revenue to shift income into future periods.
3. Bill-and-hold sale	The company records sales even though it hasn't yet delivered the goods to the customer.
4. Right-of-return sale	The company sells to distributors or other customers and can't estimate returns with sufficient accuracy due to the nature of the selling relationship.
2. Manipulating estimates of percentage complete	in order to manipulate gross profit recognition.
3.	These abuses tended to increase income (75% of the time), consistent with management generally having an incentive to increase income.
4.	Yes , auditors tended to require adjustment (56% of the time), consistent with auditors being concerned about income-increasing earnings management.

Judgment Case 6–2

Level 1: Kerry obtained the access code for Level I on December 1, meaning that Kerry has obtained the control of the right to use the software for Level I on that date. On **December 1** Cutler should recognize \$50 of revenue for Level I.

Level II: Tom passed the Level I test on December 10 and Kerry purchased access to Level II on the same day. However, Kerry received the access code for Level II on December 20, so control over the Level II software was not transferred to Kerry until December 20. Cutler should recognize \$30 of revenue for Level II on **December 20**.

Judgment Case 6-3

Scenario 1: Recognize revenue over time. The terms of the contract and all the related facts and circumstances indicate that Star controls the room as it is built. Crown is entitled to receive payments throughout the contract as evidenced by the required progress payments (with no refund of payment for any work performed to date) and by the requirement to pay for any partially completed work in the event of contract termination. Consequently, Crown's performance obligation is to provide Star with construction services, and Crown would recognize revenue over time throughout the construction process.

Scenario 2: Recognize revenue upon contract completion. The terms of the contract and all the related facts and circumstances indicate that Star does not obtain control of the gym until it is delivered. If the contract is terminated prior to completion, Crown retains the equipment, suggesting that Crown retains control of the equipment throughout the job. Consequently, Crown's performance obligation is to provide Star with a completed gym, and Crown would recognize revenue upon contract completion.

Scenario 3: Recognize revenue over time. The terms of the contract and all the related facts and circumstances indicate that Coco has the ability to direct the use of, and receive the benefit from, the consulting services as they are performed. The restaurant has an unconditional obligation to pay throughout the contract as evidenced by the nonrefundable progress payments, and the right to a report regardless of contract termination. Also, the report has no alternate use to CostDriver. Therefore, the CostDriver Company's performance obligation is to provide the restaurant with services continuously during the three months of the contract, and CostDriver should recognize revenue over the life of the contract.

Scenario 4: Recognize revenue upon contract completion. The terms of the contract and all the related facts and circumstances indicate that Edwards, the customer, obtains control of the apartment upon completion of the contract. Edwards obtains title and physical possession of the apartment only on completion of the contract. Consequently, Tower's performance obligation is to provide the customer with a completed apartment, and Tower should not recognize revenue until delivery of the apartment.