Fourth Grade

Cost Accounting Systems (2)

Cost Accounting system

Week (6) Lecture (5)

14 March 2020

Flexible Budgets, Direct-Cost Variances, and Management Control

7

Learning objectives

Explain why <u>standard</u> costs are often used in variance analysis:

- what do standard costs refer to?
- How to get standard costs?

Journal Entries Using Standard Costs

Price variance

Price variance =

[actual price - budgeted price]× actual input quantity

Efficiency (quantity variance

Efficiency variance =

[actual input quantity- the budgeted input quantity] × budgeted price

To calculate price and efficiency variances, Webb needs to obtain budgeted input prices and budgeted input quantities

Objective 5

Explain why standard costs are often used in variance analysis

- what do standard costs refer to?
- How to get standard costs?

The term *standard* refers to many different things:

- ■ A standard input is a carefully determined **quantity** of input, such as **square** yards of **cloth** or **direct** manufacturing **labor-hours**, required for **one** unit of **output**, such as a jacket.
- ■ A standard **price** is a carefully determined price a company **expects** to pay for **a** unit of input. In the Webb example, the standard wage rate the firm expects to pay its operators is an example of a standard price of a **direct** manufacturing **labor-hour**.
- ■ A standard cost is a carefully determined cost of a **unit** of output, such as the standard **direct** manufacturing **labor** cost of a jacket at Webb.

How managers can obtain Budgeted Input Prices and Budgeted Input Quantities?

- To calculate price and efficiency variances, Webb needs to obtain budgeted input prices and budgeted input quantities.
- Webb's three main sources for this information are:
- (1) past data
- (2) data from similar companies, and
- (3) standards.

- Each source has its advantages and disadvantages.

1) Actual input data from past periods.

- Most companies have past data on actual input prices and actual input quantities.

Advantages:

- Past data represent quantities and prices that are **real** rather than hypothetical, so they can be very useful benchmarks for measuring improvements in performance.
- Moreover, past data are typically easy to collect at a low cost.

Disadvantages:

- A firm's inefficiencies, such as the **wastage** of direct materials, are incorporated in **past** data. Consequently, the data do **NOT** represent the performance the firm could have **ideally** attained, only the performance it achieved in the past.
- Past data also do **not** incorporate any changes expected for the budget period, such as **improvements** resulting from **new investments** in technology.

2. Data from other companies that have similar processes.

Another source of information is data from **peer** companies or companies that have similar processes, which can serve as a benchmark.

- ***Advantages:***
- Data from other companies can provide a firm useful information about how it's performing relative to its competitors.
- ***Disadvantages***:
- Input-price and input-quantity data from other companies are often **not available** or may **not** be **comparable** to a particular company's situation.

3. Standards developed by the firm itself

- A standard is a carefully determined price, cost, or quantity that is used as a benchmark for judging performance.
- Standards are usually expressed on a per-unit basis.

- ***Advantages:***
- Standard times:
- (1) aim to **exclude** past **inefficiencies** and
- (2) take into account **changes** expected to occur in the **budget** period.
- ***Disadvantages***:
- Because they are **not** based on **realized** benchmarks, the standards might **not** be **achievable**, and workers could get **discouraged** trying to meet them.

Journal Entries Using Standard Costs

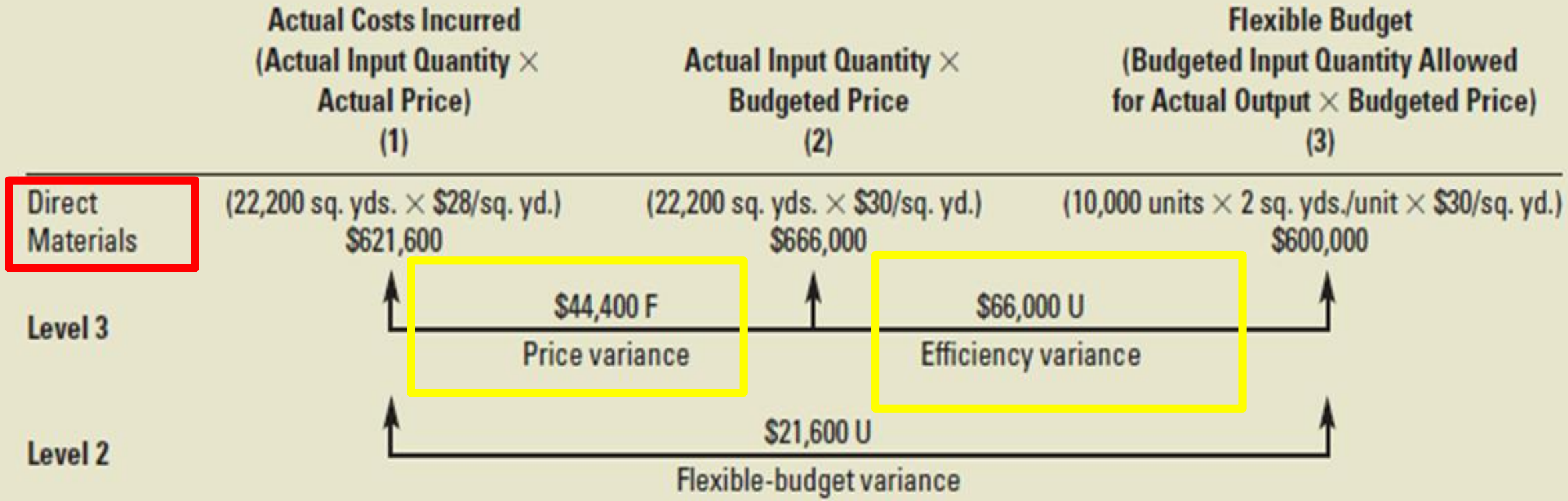
Journal Entries Using Standard Costs

- We will now illustrate journal entries for Webb Company using standard costing. The focus is on **direct materials** and **direct** manufacturing **labor**.

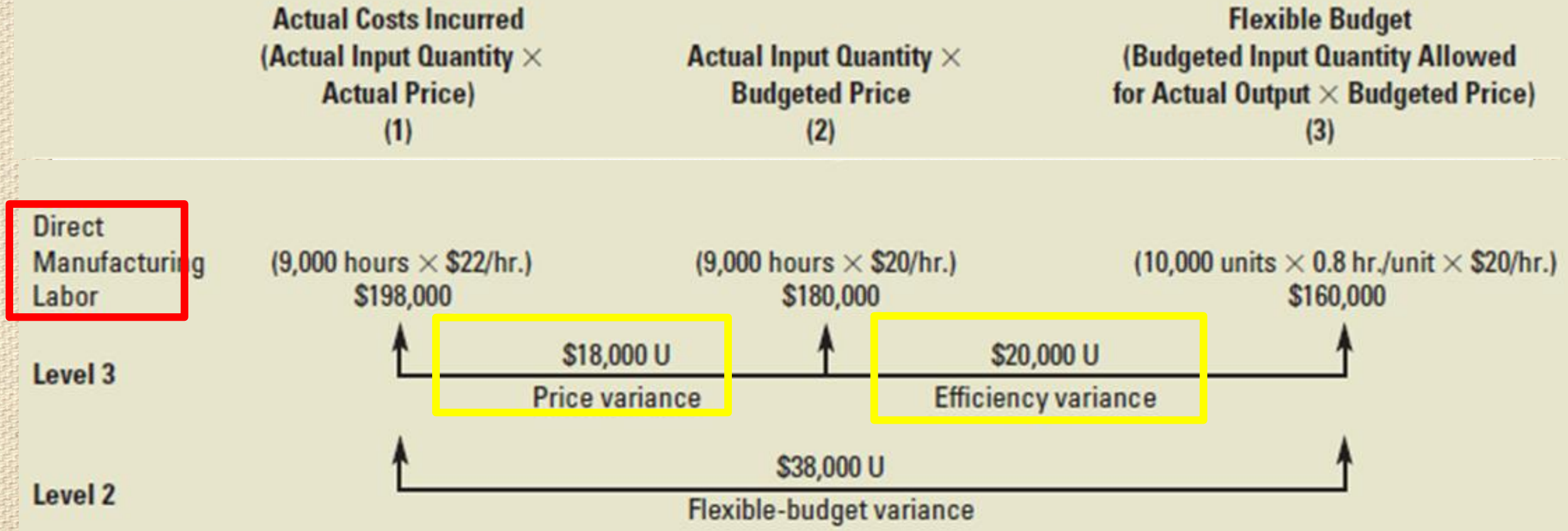
Notes:

- We will depend on numbers we calculated last lecture for variances (price and efficiency)
- *In each of the following entries,*
  - ***Unfavorable*** *variances are always* ***debits*** *(they* ***decrease*** *operating* ***income****), and*
  - ***Favorable*** *variances are always* ***credits*** *(they* ***increase*** *operating* ***income****).*

Level 3 Analysis



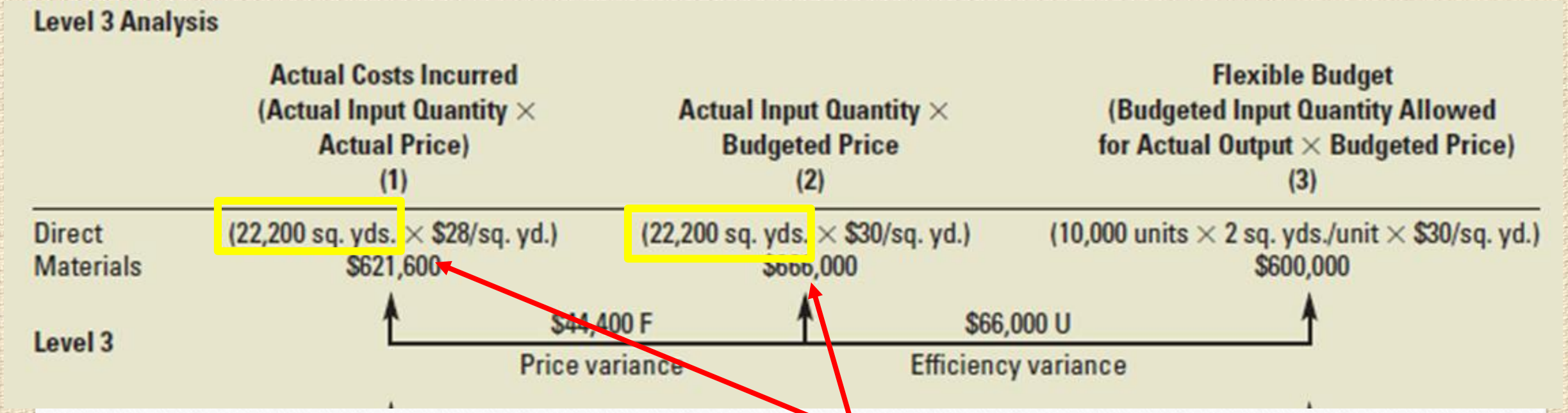
Level 3 Analysis



Journal Entry 1A: Price variance for direct material

Journal Entry 1A: Price variance for direct material

- Isolate the direct materials price variance at the time the materials were purchased.
- This is done by increasing (debiting) the Direct Materials Control account by the standard price
- Webb established for purchasing the materials. This is the early time possible to isolate this variance.



- Accounts:
  - Direct material control (debit) **($ 666,000) (standard budgeted price)**
  - Actual payable control (credit) what is actual paid to supplier **($ 621,600)**

(must be the actual Q with its actual price paid to the supplier)

- **Price variance will be credited (it is favorable)**

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1a.	Direct Materials Control		
	(22,200 square yards × $30 per square yard)	666,000	
	Direct Materials Price Variance		
	(22,200 square yards × $2 per square yard)		44,400
	Accounts Payable Control		
	(22,200 square yards × $28 per square yard)		621,600
	This records the direct materials purchased.		

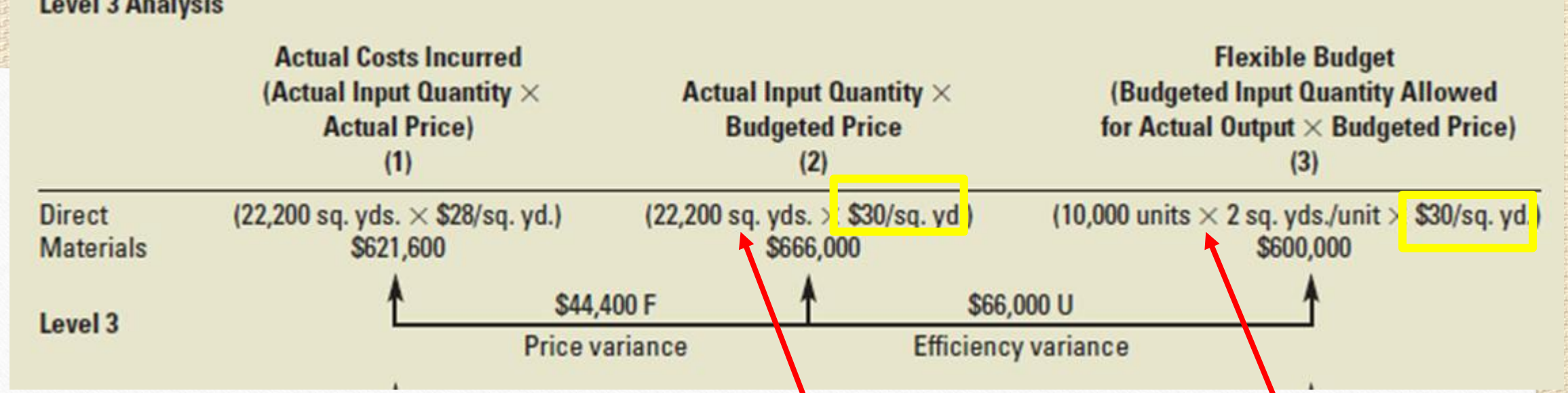
Journal Entry 1B: efficiency variance for direct material

Journal Entry 1B

- Isolate the direct materials efficiency variance at the time the direct materials are used by increasing (debiting) the Work-in-Process Control account.
- Use the standard quantities allowed for the actual output units manufactured times their standard purchase prices.

Accounts:

- Direct material control (credit) **($ 666,000)**
- Work-in process control (debit) what is actual paid to supplier **($ 600,000)**



- Isolate the direct materials efficiency variance at the time the direct materials are used by increasing (debiting) the Work-in-Process Control account. Use the standard quantities allowed for the actual output units manufactured times their standard purchase prices.

Accounts:

- Direct material control (credit) **($ 666,000)** (using **actual** quantity)
- Work-in process control (debit) what is actual paid to supplier **($ 600,000)** **(budgeted quantity)**
- **Efficiency variance is debit (unfavorable variance) with** $66,000

Journal Entry 1B

Accounts:

- Direct material control (credit) **($ 666,000)** (using **actual** quantity)
- Work-in process control (debit) what is actual paid to supplier **($ 600,000) (budgeted quantity)**
- **Efficiency variance is debit (unfavorable variance) with** $66,000

1b.	Work-in-Process Control		
	(10,000 jackets × 2 yards per jacket × $30 per square yard)	600,000	
	Direct Materials Efficiency Variance		
	(2,200 square yards × $30 per square yard)	66,000	
	Direct Materials Control		
	(22,200 square yards × $30 per square yard)		666,000
	This records the direct materials used.		


The End