CHAPTER 13 - STANDARD COSTING

Problem 1 – Michelle Corporation

1. Actual price	P 2.52	2/. Actual qty. used	4.450
Std. price	(2.50)	Std. qty.	(4,050)
Difference	0.02	Difference	400
X Act. Qty.	4,450	x Std. price	x 2.50
MPV	89.00 U	MQV	1.000 U

3 Actual rate	P 3.00	4. Actual hours	3,150
Std. rate	(3.10)	Std. hours	(3,000)
Difference	(0.10)	Difference	150
X Actual Hrs.	3,150	x Std. rate	3.10
Labor rate var.	(315) F	LEV	465 U

Problem 2 – Longview Hospital

1. Actual price (9,540/3,600)	2.65	2. Actual qty. used	3,200
Std. price	(2.75)	Std. qty (1,500 x2)	(3,000)
Difference	(0.10)	Difference	200
X Actual quantity	3,600	x Std. price	2.75
MPV	(360) F	MQV	550U

2. Actual rate (5100/340)	15.00	4. Actual hrs.	340
Std. rate	15.00	Std. hrs. (1,500 x .2)	(300)
Difference	0	Difference	40
		X Std. rate	15.00
		LEV	600 U

5. Actual hrs.	340
Std. hrs.	(300)
Difference	40
X Variable rate	7.00
Variable efficiency	280 U

Problem 3 - Golden Shower Company

	Total	5,000 DLHrs. Per DLHr	Std. hrs./unit = 5,000 DLHrs..
Fixed	5,000	1.00	4,000 units
Variable	7,500	1.50	
Total	12,500	2.50	= 1.25 Hrs./unit

Materials

1. Actual price	P 1.02	2. Actual qty.	7,200
Std. price	(1,00)	Std.(3,500 x 2)	7,000
Difference	.02	Difference	200
X actual qty.	7,200	x Std. price	1.00

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	MPV	**144 U**		**MQV**	**200 U**
Labor					
1.	**Actual rate (33,750/4,500)**	**7,50**	**2/**	**Actual hrs.**	**4,500**
	Std. rate	**(8.00)**		**Std. hrs. (3,500 x 1.25)**	**4,375**
	Difference	**(0.50)**		**Difference**	**125**
	X actual hrs.	**4,500**		**x Std. rate**	**8.00**
	LRV	**(2,250) F**		**LEV**	**1.000U**

Factory overhead

1.	**Actual overhead**		**11.250.00**
	Less: Budget allowed on std. hrs.		
	Fixed	**5,000**	
	Variable (4,375 x 1.50)	**6,562.50**	**11,562.50**
	Controllable variance		**(312.50) F**
2.	**Budget allowed on std hrs.**		**11,562.50**
	Less: OH applied to production		
	(4,3,75 x 2.50)		**10,937.50**
	Volume variance		**625.00**

Problem 4 – Fenton Company

		155,000 DLHrs.	
	Total	**Per DLHr**	
Fixed	**620,000**	**4.00**	**(4 x 155,000)**
Variable	**465,000**	**3.00**	**(465,000/155,000)**
Total	**1,085,000**	**7.00**	

Std. hrs./unit = 10.00/4 = 2.5 Hrs.

1.	**Actual variable overhead**		**475,000**
	Less: AH x Variable rate (148,000 x 3)		**444,000**
	Variable spending variance		**31,000 U**
	AH x Variable rate		**444,000**
	Less: Std. hrs. x V rate (60,000 x 2.5 x 3)		**450,000**
	Variable efficiency variance		**(6,000) F**
2.	**Actual fixed overhead**		**632,500**
	Less: Fixed overhead at normal capacity		**620,000**
	Fixed spending variance		**12,500 U**
	Fixed overhead at normal capacity		**620,000**
	Less: Std. hrs. x fixed rate (150,000 x 4)		**600,000**
	Fixed volume variance		**20,000 U**
3.	**Actual factory overhead (475,000 + 632,500)**		**1,107,500**
	Less: Budget allowed on std. hrs.		
	Fixed	**620,000**	
	Variable (150,000 x 3)	**450,000**	**1,070,000**

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Controllable variance		**37,500 U**
Budget allowed on std. hrs		**1,070,000**
Less: Std. hrs. x OH rate (150,000 x 7)		**1,050,000**
Volume variance		**20,000 U**

4. Actual factory overhead **1,107,500**

Less: Budget allowed on actual hrs.		
Fixed	**620,000**	
Variable (148,000 x 3)	**444,000**	**1,064,000**
Spending variance		**43,500 U**
Budget allowed on actual hrs.		**1,064,000**
Less: Budget allowed on std. hrs.		**1,070,000**
Efficiency variance		**(6,000) F**
Budget allowed on std. hrs.		**1,070,000**
Less: Std. hrs. x FO rate (150,000 x 7)		**1,050,000**
Volume variance		**20,000 U**

5. Spending variance **43,500 U**

Variable efficiency variance	**(6,000) F**
Actual hours	**148,000**
Less: Standard hours	**150,000**
Difference	**(2,000)**
X Fixed overhead rate	**4.00**
Fixed efficiency variance	**(8,000) F**
Budget allowed on actual hours	**1,064,000**
Less: Actual hrs. x factory OH rate	
148,000 x 7	**1,036,000**
Idle capacity variance	**28,000 U**

Problem 5 - GDL Company
Additional information - . Materials added 100% at the beginning

Units completed	**40,000**				
From in process, beg.	**10,000**	**-**	**20%**	**2,000**	
From started	**30,000**	**100%**	**30,000**	**100%**	**30,000**
Units in process, end	**20,000**	**100%**	**20,000**	**40%**	**8,000**
Total	**60,000**		**50,000**		**40,000**

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Materials

Actual price	1.20	Actual qty. used	1,000,000
Less: Std. price	1.00	Less: Std. qty.	1,000,000
Difference	0.20	Difference	0
X Actual mat. Purchased	2,000,000	x Std. price	1.00
Mat. Price variance	400,000 U	Mat. Usage variance	0

Labor

Actual rate	14.00	Actual hours	60,000
Less: Std. rate	15.00	Less: Std. hours	40,000
Difference	(1.00)	Difference	20,000
X Actual hrs.	60,000	x Std. rate	15.00
Labor rate varianc	(60,000)F	Labor efficiency	300,000

Factory overhead

Actual factory overhead (280,000 + 83,000)		363,000
Less: Budget allowed on std. hrs.		
Fixed	80,000	
Variable (40,000 x 5)	200,000	280,000
Controllable variance		83,000U
Budget allowed on std. hrs.		280,000
Less: Overhead applied (40,000 x 7)		280,000
Volume variance		-

Problem 6 – Mentor Company

Materials

Actual price	1.05	Actual qty. used	60,500
Less: Std. price	1.00	Less: Std. qty. (5,000 x 12)	60,000
Difference	0.05	Difference	500
X Actual qty. (63,525/1.05)	60,500	x Std. price	1.00
Mat. Price variance	3,025 U	Mat. Qty. variance	500U

Labor

Actual rate	9.15	Actual hours	10,500
Less: Std. price	9.00	Less: Std. hrs. (5,000 x 2)	10,000
Difference	0.15	Difference	500
X Actual hrs.(96,075/9.15)	10.500	x Std. rate	9.00
Labor rate variance	1,575U	Labor efficiency	4,500U

144,000 DLHrs.

	Total	Per Hour
Fixed	288,000	2.00
Variable	360,000	2.50

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	Total	**648,000**	**4.50**		
Factory overhead					
	Actual factory overhead	**(27,000 + 24,500)**		**51,500**	
	Less: Budget allowed on std. hrs.				
		Fixed (288,000/12)	**24,000**		
		Variable (10,000 x 2.50)	**25,000**	**49,000**	
	Controllable variance			**2,500**	
	Budget allowed on std. hours			**49,000**	
	Less: Std. hrs. x std. rate (10,000 x 4.50)			**45,000**	
	Volume variance			**4,000**	
1.	**Materials (60,500 x 1.00)**			**60,500**	
	Material price variance			**3,025**	
		Accounts payable			**63,525**
2.	**Work in process (5,000 x 12 x 1)**			**60,000**	
	Material quantity variance			**500**	
		Materials			**60,500**
3.	**Payroll**			**96,075**	
		Accrued payroll			**96,075**
4.	**Work in process (5,000 x 2 x 9.00)**			**90,000**	
	Labor rate variance			**1,575**	
	Labor efficiency variance			**4,500**	
		Payroll			**96,075**
5.	**Factory Overhead Control**			**51,500**	
		Misc, Accounts			**51,500**
6.	**Work in process**			**45,000**	
		Factory overhead applied			**45,000**
7.	**Factory overhead applied**			**45,000**	
	Factory overhead - Controllable variance			**2,500**	
	Factory overhead - Volume variance			**4,000**	
		Factory overhead control			**51,500**
8.	**Finished goods (5,000 x 39)**			**195,000**	
		Work in process			**195,000**
9.	**Accounts receivable (4,500 x 100)**			**450,000**	
		Sales			**450,000**
10.	**Cost of Goods sold (4,500 x 39)**			**175,500**	

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	Finished goods		**175,500**
11.	**Cost of goods sold**	**16,100**	
	Material price variance		**3,025**
	Material quantity variance		**500**
	Labor rate variance	**1,575**	
	Labor efficiency variance		**4,500**
	Factory overhead – controllable variance		**2,500**
	Factory overhead – volume variance		**4,000**

Problem 7 - Risk Company

1.	**Actual hours**	**101,000**
	Less: Std. hrs.	**101,300 (1)**
	Difference	**(300)**
	X Variable rate	**3**
	Variable efficiency	**(900)**
2.	**Actual variable overhead**	**303,750**
	Less: Variable spending variance	**750**
	Actual hrs. x variable rate	**303,000**
	Divide by variable rate	**3.00**
	Actual hrs.	**101,000 (2)**
3.	**Fixed overhead at normal capacity**	**295,000**
	Les: Overhead applied to production	**398,835 (3)**
	Fixed volume variance	**(3,835)**
	Actual fixed overhead	**299,950**
	Less: Fixed spending	**4,950**
	Fixed overhead at normal capacity	**295,000**

Problem 8 – Liberty Co.

	Actual hours	**11,120**
	Less: Standard hours	**10,000**
	Difference	**1,120**
	X Standard rate	**3.75**
	Labor efficiency variance	**4.200**

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QUIZ

Jack Company uses a standard cost system. The standard product cost for direct materials were six pieces at P62.50 per piece; for direct labor they were 12 hours at P45.00 per hour; and for factory overhead they were 12 hours at P20.00 per hour. During the month of May, production were 400 sets. The direct materials used for the 400 sets amounted to 2,200 pieces for a total cost of P154,000. The direct labor cost for 5,000 actual hours was P237,500. Actual factory overhead was P95,000.

Required:

1. **Material price variance**
2. **Material quantity variance**
3. **Labor rate variance**
4. **Labor efficiency variance**

SOLUTION TO THE QUIZ

Materials

Actual price (154,000/2,200)	**70**	**Actual qty. used**	**2.200**
Less: Std. price	**62.50**	**Less: Std. qty.(400 x 6)**	**2,400**
Difference	**7.50**	**Difference**	**(200)**
X Actual mat. Purchased	**2,200**	**x Std. price**	**62.50**
Mat. Price variance	**17,025 U**	**Mat. Usage variance**	**(12,500)F**

Labor

Actual rate (237,500/5,000	**47.50**	**Actual hours**	**5,000**
Less: Std. rate	**45.00**	**Less: Std.hrs.(400x12)**	**4,800**
Difference	**2.50**	**Difference**	**200**
X Actual hrs.	**5,000**	**x Std. rate**	**45.00**
Labor rate varianc	**12,500 U**	**Labor efficiency**	**9,000 U**

QUIZ

The data below relate t the month of August for Madel Company, which uses a standard cost system.

Actual direct labor hours used	**14,000**
Standard direct labor hours allowed	**15,000**
Actual total direct labor	**P43,400**
Direct labor rate variance (debit)	**1,400**
Actual total factory overhead	**32,000**
Budgeted fixed factory overhead costs	**9,000**
Normal capacity in direct labor hours	**12,000**
Total factory overhead application rate per DLhr	**2.25**

Madel uses a two-way analysis for factory overhead variances: budget (controllable) and volume. A job order cost system is used to accumulate costs.

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REQUIRED;

1. **Direct labor efficiency variance**
2. **Factory overhead budget variance**
3. **Factory overhead (production) volume variance.**

SOLUTION TO THE QUIZ

1. Actual labor hours	**14,000**
Less: Std. hours	**15,000**
Difference	**(1,000)**
X Std. rate	**3.00**
Labor efficiency variance	**(3,000) F**

Actual rate (43,400/14,000)	**3.10**
Less: Std. rate	**3.00**
Difference (1,400/14,000)	**0.10**
X Actual hrs	**14,000**
Labor rate variance	**1,400**

MULTIPLE CHOICE – COMPUTATIONAL

1. **C**
2. **A**
3. **C**
4. **C**
5. **B**
6. **D**
7. **D**
8. **C**
9. **B**
10. **C**
11. **B**
12. **B**
13. **D**
14. **C**
15. **C**
16. **C**
17. **D**
18. **C**
19. **D**
20. **D**
21. **B**
22. **A**

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23. D
24. D
25. B
26. D
27. D
28. D
29. D.
30. B
31. C
32. D
33. D
34. D

35. NOT ENOUGH INFORMATION

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