**Assignment 05**

1. Tom owns a fruit smoothie shop at the local mall. Each smoothie requires ¼ pound of mixed berries, which are expected to cost $4 per pound during the summer months. Shop employees are paid $10 per hour. Variable overhead consists of utilities and supplies. The variable overhead rate is $0.05 per minute of DL time. Each smoothie should require 3 minutes of DL time.

1) What is the standard cost of direct materials for each smoothie?

Standard cost of direct materials = Standard quantity of DM \* Standard price of DM

= 0.25 lbs. \* $4.00/lb.

**= $1.00**

2) What is the standard cost of direct labor for each smoothie?

Standard cost of direct labor = Standard quantity of DL \* Standard price of DL

= 3 mins \* ($10/hr. / 60mins/hr.)

**= $0.50**

3) What is the standard cost of variable overhead for each smoothie?

Standard cost of variable overhead = Standard quantity of time \* Variable overhead rate

= 3 mins \* $0.05 per min

**= $0.15**

1. Tom owns a fruit smoothie shop at the local mall. Each smoothie requires ¼ pound of mixed berries, which are expected to cost $4 per pound during the summer months. During the month of June, Tom purchased and used 1,300 pounds of mixed berries at a cost of $3.75 per pound. Tom’s shop sold 5,000 smoothies during the month.

1) Calculate the DM price variance. Is the variance favorable or unfavorable?

DM price variance =. Actual Quantity Purchased \* (Actual Price – Standard Price)

= 1300 lbs. \* ($3.75/lb. - $.00/lb.)

**= $325**

The price variance is favorable since the berries cost less per pound than

anticipated.

2) Calculate the DM efficiency variance. Is the variance favorable or unfavorable?

DM quantity variance = Standard Price \* (Actual Quantity used – Standard Quantity Allowed)

= $4.00/lb. \* [1,300lbs – (5,000 smoothies \* 0.25 lbs./smoothies)]

= $4.00/lb. \* (1,300 lbs. – 1250 lbs.)

= **$200**

The efficiency variance is unfavorable since the business used more berries than anticipated.

3) Calculate the total DM variance. Is the variance favorable or unfavorable?

The total DM variance is **$125**.

The total DM variance is the difference between the actual DM cost and the flexible budget for DM.

Actual DM cost = 1300lbs \* $3.75lb = $4,875

Std DM cost/smoothie = 0.25lbs \* $4.00/lbs. = $1.00

Flexible budget = 5000 smoothies \* Standard DM cost/smoothie = $5000

Difference between Actual DM cost and flexible budget = $5,000 - $4,875 = $125

If the company both purchased and used the same quantity of DM, it is also

the combination of the DM price variance ($325) and the DM efficiency variance ($200).

The lower-than-expected price of berries more than offset the additional quantity the shop used, thus resulting in an overall favorable variance.

1. Tom owns a fruit smoothie shop at the local mall. The budgeted monthly fixed overhead   
   costs consist of the store lease payment ($1,000), advertising ($250), equipment   
   depreciation ($125), and store Wi-Fi ($80). Actual fixed overhead expenses for June were $1,600. When calculating the fixed overhead rate, Tom anticipated selling 4,800   
   smoothies during each summer month. He actually sold 5,000 in June.

1) What is the fixed overhead budget variance for the month of June? Is the variance favorable or unfavorable?

The fixed overhead budget variance is $145. It is the difference between what was budgeted for fixed overhead ($1,455) and what was actually incurred ($1,600). The variance is unfavorable since actual fixed overhead was higher than budgeted.   
2) Will Tom’s fixed overhead volume variance for the month of June be favorable or unfavorable? Explain.

Since Tom’s actual store volume was higher than anticipated, the fixed overhead volume variance will be favorable. By producing at a higher volume, Tom was able to use the store’s fixed overhead costs more efficiently.