PMA e-ssentials

Supermarket Math

Self-Directed Study Guide

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How To Use This Workbook

The purpose of this workbook series is to provide you with knowledge, skill and ability on a wide range of subjects related to your produce department. To ensure success, you will want to identify who your manager will be for this program.

Mentor Name: _____ Date: _____

If you have more than one manager or trainer, please list them all below. Any one of these individuals is capable of signing-off on your work. Refer to the individual directly responsible for your training for more information.

_____

_____

_____

_____

Accompanying CD

Some exercises presented here may require additional practice for trainees to perfect. Whenever you see the CD icon pictured below, you can print out that activity from the CD and practice it as often as needed to obtain mastery.

You will need to complete all of the exercises and work activities and have your manager sign and date the designated areas of the workbook. This way, you and your manager will know that you have successfully completed all of the learning exercises and have achieved the desired level of understanding, skill and ability to execute tasks needed to do your job well.

What You Will Learn

This course is geared toward providing you with the skills you need to complete calculations and sales forecasts that will help you effectively manage your produce department. After completing the readings and exercises in this workbook, you will be able to do the following:

Execute basic mathematical calculations that are essential for running the produce department.

You will learn basic financial terms that are found on an income statement and how those numbers are calculated.

Explain the law of diminishing returns.

It's important to understand how putting too many resources, or too much effort, into one aspect of your business can actually lead to undesirable results.

Demonstrate the calculations involving sales, costs and profit.

One key to a profitable department is understanding how much product to order so you have what you need on hand to keep your customers happy and your sales high.

What You Will Learn

Recognize methods for forecasting sales and trends based on history.

You'll learn how to forecast sales and analyze existing sales trends to help you order more accurately from suppliers.

Identify the impact of loss or shrink on profits.

Because grocery stores make their money on the volume of sales, one of the largest variables that can make or break the success of your store is shrink.

Explain how to write accurate orders.

You will learn how to place an accurate order by understanding your on-hand inventory and projected sales.

Demonstrate an understanding of how to use customer count numbers in order to deduce needed labor budget.

You will learn how to calculate sales per customer, sales per labor hour, and labor percentage to help you successfully schedule employees.

Introduction

Understanding Your Business

The most successful retail produce managers will tell you that the key to personal effectiveness is understanding the top line and the bottom line – that is, *top line sales* and *bottom line profit*.

So how do you impact your bottom line profit? By focusing on increasing sales and reducing costs. Throughout this course, you will learn techniques that will help you accomplish these goals.

Introduction

Activity: Basic Terms

NOTE

All of the terms you will learn in this course are provided in the glossary on page 44 for your reference.

This activity introduces you to basic financial terms. Read each question and then choose the correct answer.

1: Top line sales, more commonly referred to as sales, equals the total dollars spent by your customers. For this example, you need to figure out how much you made in top line sales on one case of cabbage.

If you sell one case of cabbage for $40 and you paid $20 for it, what are your top line sales for cabbage?

A. $10
B. $20
C. $40
D. $80

2: The product cost is what you paid for an item. Let's continue with the same example. You need to figure out what the product cost is for cabbage.

If you sell one case of cabbage for $40 and you paid $20 for it, what is your product cost for cabbage?

A. $10
B. $20
C. $30
D. $40

3: As a review, you need to calculate what the top line sales are for cabbage. If you sell four cases of cabbage for $40 and you paid $20 for them, what are your top line sales for cabbage?

A. $40
B. $80
C. $160
D. $180

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Activity: Basic Terms (continued)

4: Bottom line profit, more commonly referred to as profit, is determined by taking your sales and subtracting the product cost. For this example, you need to figure out how much bottom line profit you have made for the day on cabbage.

If top line sales for the day on cabbage were $240 and the product cost was $180, what is the bottom line profit?

A. $60
B. $40
C. $100
D. $80

5: Now you'll practice calculating the bottom line profit of a different item in the produce department. If sales for the day on carrots were $600 and the product cost was $200, what is the bottom line profit?

A. $800
B. $500
C. $200
D. $400

6: Food cost percentage is determined by dividing the product cost by sales and then multiplying that number by 100. If you sell four cases of cabbage for $40 and you paid $20 for them. What is your food cost percentage?

A. 20%
B. 40%
C. 50%
D. 60%

7: Now you'll have an opportunity to practice calculating the food cost percentage again. If you sell eight cases of cabbage for $42 and you paid $18 for them, what is your food cost percentage?

A. 23%
B. 43%
C. 53%
D. 63%

Introduction

Answers to Activity

Review the following correct answers and check them against your responses.

1: C. $40

Your top line sales, or sales, are what the customers have paid for the product. If you sold an entire case of cabbage for a total of $40, your top line sales would be $40.

2: B. $20

Your product cost is what you actually paid for the item. So if one case of cabbage cost you $20, your product cost is $20 per case.

3: C. $160

Your top line sales are what the customer paid for the product. Four cases x $40 for each case = $160

4: A. $60

Your bottom line profit is your top line sales minus your product cost. If we take the cabbage sales of $240 minus the product cost of $180, our bottom line profit is $60.

5: D. $400

Your bottom line profit is your sales minus product costs. If we take the total carrot sales of $600 minus the product cost of $200, our bottom line profit is $400.

6: C. 50%

Your food cost is calculated by diving $20 by $40 to get .5. We then multiply .5 by 100 to get 50%.

7: B. 43%

Your food cost is calculated by dividing $18 by $42 to get .43 (or .428 rounded up). We then multiply .43 by 100 to get 43%.

CONGRATULATIONS!

You've completed the practice section. Throughout the rest of this guide, you will learn more about having a positive impact on your top line sales and bottom line profit.

Law of Diminishing Returns

Too Much of a Good Thing

Many people think that if some is good, a lot is great. This is not necessarily the case. In some cases, putting too many resources, or too much effort, into one aspect of your business can actually lead to undesirable results.

If you use extreme responses or focus too much on one thing, you will always run into a business law called the *Law of Diminishing Returns*.

The Law of Diminishing Return says:

Additional input of variable factors, such as expenditures and effort, will increase returns up to a point, but beyond this point the returns actually diminish and become less and less. In other words, there will come a point where too much attention is given to an area and the returns no longer justify that attention.

On the following pages, you'll learn how two different produce managers ran into the Law of Diminishing Returns from different directions.

Law of Diminishing Returns

Manager Example One

Hi, I'm Ken and I've been a retail produce manager of a small grocery store in the Midwest for the last eight years. In the past, I focused the majority of my efforts on controlling my shrink percentages. I became so focused on shrink that I began stocking less product.

Well, I was successful in lowering my shrink numbers, but guess what else I lowered? My sales. I was so extreme in my approach to combating shrink that I wasn't offering enough product to my customers.

All the work I put in trying to get my ordering just right was actually costing me more than I was gaining! Needless to say, I've changed the way I do business!

Law of Diminishing Returns

Manager Example Two

Hi, I'm Stacy and over the course of my nine years as a retail produce manager, I, too, have changed the way I do business. I used to focus purely on sales. Everything we stocked had to be perfect so that the customer would be convinced to purchase. I had a lot of staff on the floor, constantly stocking and culling so our produce always looked great – and it did.

But my labor and food costs spiraled out of control. My sales were pretty good, but the overage in labor and food costs cut a lot out of my profit.

Law of Diminishing Returns

Activity: The Point of Diminished Returns

Just like Ken and Stacy, you will need to be able to identify the point at which the return on your investment will begin to diminish. Completing this activity will help you better understand this concept.

Staffing Options

This coming Monday you have to schedule 36 person hours for stocking, culling and clean-up. By dividing 36 hours in several ways, you can come up with some different labor options:

- ❑ Staff 2 clerks for 18 hours
- ❑ Staff 3 clerks for 12 hours
- ❑ Staff 4 clerks for 9 hours
- ❑ Staff 6 clerks for 6 hours
- ❑ Staff 9 clerks for 4 hours
- ❑ Staff 12 clerks for 3 hours
- ❑ Staff 18 clerks for 2 hours

Four of these options cannot be completed in 36 hours without sacrificing other areas of your operation. Mark a check next to the four options that would yield diminished returns.

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Activity: The Point of Diminished Returns (continued)

Identifying the Reasons

Mark a check next to each reason you think having two clerks work 18-hour shifts would yield diminished returns.

- ❑ Too many clerks in the storage area
- ❑ Too many clerks on the floor
- ❑ Too many breaks and meals
- ❑ Not enough hand trucks or pallet jacks
- ❑ Long hours, too tired to get it all done
- ❑ Too much time running back and forth for stock
- ❑ Not able to keep up to the demand in a timely manner
- ❑ Not able to cover the culling and cleanliness for the entire day

Now mark a check next to each reason you think having 18 clerks work a two-hour shift would yield diminished returns.

- ❑ Too many clerks in the storage area
- ❑ Too many clerks on the floor
- ❑ Too many breaks and meals
- ❑ Not enough hand trucks or pallet jacks
- ❑ Long hours, too tired to get it all done
- ❑ Too much time running back and forth for stock
- ❑ Not able to keep up to the demand in a timely manner
- ❑ Not able to cover the culling and cleanliness for the entire day

Law of Diminishing Returns

Activity Answers

Review the following correct answers and check them against your responses on pages 13 - 14.

Staffing Options

The four options that would yield diminished returns are:

- Staff 2 clerks for 18 hours
- Staff 3 clerks for 12 hours
- Staff 12 clerks for 3 hours
- Staff 18 clerks for 2 hours

Identifying the Reasons

Having two clerks work 18-hour shifts would yield diminished returns for the following reasons:

- Too many breaks and meals
- Long hours, too tired to get it all done
- Too much time running back and forth for stock
- Not able to keep up to the demand in a timely manner

Having 18 clerks works a two-hour shift would yield diminished returns for the following reasons:

- Too many clerks in the storage area
- Too many clerks on the floor
- Not enough hand trucks or pallet jacks
- Not able to cover the culling and cleanliness for the entire day

Law of Diminishing Returns

Now read Stacy's final comments about what she learned regarding the Law of Diminishing Returns.

What I eventually realized was that I was never getting back all the time, energy and money we were investing to maintain what I considered to be a perfect produce department. In the end, perfect is what results in a healthy bottom line. I re-evaluated what we were investing in people hours and food cost to be more in line with our expected return on our investment.

Law of Diminishing Returns

Interview Your Manager

In order to learn more about how the Law of Diminishing Returns can affect your store, interview your manager by asking the following questions.

Q: Can you share any examples of how the Law of Diminishing Returns has impacted our store?

Q: What lessons were learned?

Q: What can I do to avoid focusing too much attention on one aspect of our operations?

Lessons Learned

As I mentioned earlier, I focused on costs for the longest time. If my labor was a quarter percent too high, I backed off on labor. If my food cost was too high, I left product out longer than I should. I ordered less to reduce my shrink. I even cut prices to close out old product when I had ripe, good product sitting in the back. I was running my numbers, but the most important number was dropping – my sales! Yes, my overly obsessed cost management process actually reduced the amount of high-quality product on the floor. I did such a great job managing old and new product, I actually tricked our customers.

One customer once asked me, "Sometimes when I come in you have green bananas and other times they are spotted. I come in the same day every week. When can I get green bananas?"

Oh, that's easy, I replied. Green bananas are available on Monday and Thursday afternoon after the delivery truck comes in.

The customer gave me a disappointed look and said, "But I only come in on Saturdays."

Ouch! I realized that either my customers were going to have to change the days they shopped, or I needed to carry their product options every day. You see, I was product-centric. I cared so much about the product, I forgot about sales!

I needed to be customer-centric. I needed to give my customers what they wanted so they would be happy and continue to shop here. I want every customer who comes into my produce department to find exactly what they're looking for and then some! And my team will help them. Three years later, I still have the same sales objectives, but now I staff – and stock – for our customers!

Driving Sales

Increasing the Accuracy of Your Orders

As you can see from Ken's testimonial, not providing what your customers want can hurt your sales. Unfortunately, your customers don't tell you each week what they want you to have waiting for them on their next shopping trip. One of the keys to being a profitable department is understanding how much product to order so you have what you need on hand to keep your customers happy and your sales as high as possible.

One of the best ways to know you are ordering the right things, in the right amounts, to be delivered at the right time, is to have a clear picture of:

- What you have sold in the past.
- What may have influenced those sales.
- How your vendors operate.

Driving Sales

Forecasting

There are several components that go into good forecasting. They include analysis of last years sales, recent sales trends and an analysis and comparison of those two.

Step 1: Know your sales history

You need to know how much of a specific product your store sells. Understand that the sales history for one item is not necessarily the same for all items in your department.

DEFINITION

Forecasting:
Projecting what you will need based on what you have sold in the past is called forecasting.

Forecasting sales and analyzing existing sales trends can help you order more accurately from suppliers and help you predict how much you will need of each product in the future.

Step 2: Know the direction your sales are trending

Before you can project sales, you need to know if you are running an increase or decrease in sales over last year, both in the department as a whole, and for each individual produce item. Knowing this will give you the basis you need for projecting what you might sell in the near future.

Driving Sales

To calculate the direction of your sales, subtract last years sales from this years sales. The following is an example.

Sales for the current year for lettuce	$21,000
Sales for the previous year for lettuce	$20,000
Changes in sales	$1,000 increase

In this example, sales have increased $1,000 for lettuce. This indicates that the recent history shows a trend that sales are growing from last year.

Step 3: Understand how to compare last year and what is happening recently

Sometimes knowing the dollar increase of sales is not enough. It is easier to forecast the amount of produce you will need to purchase if you know the percentage of increase or decrease in sales. The next step is to calculate the percent total of our $1,000 increase. To calculate percentage, take the amount of increase in sales and divide it by last years sales. Then multiply that total by 100.

Sales for the current year for lettuce	$21,000
Sales for the previous year for lettuce	$20,000
Changes in sales	$1,000 increase
Changes in sales divided by previous years sales	$1,000 ÷ $20,000 = 0.05
Multiply total by 100	0.05 x 100
Percent of increase in sales of lettuce	5%

In this example, we already knew sales were increasing. However, we now understand that sales increased by 5% over last years numbers. A produce manager must determine if sales are growing, shrinking or staying the same for each produce item in their department to create an accurate forecast to assist them in their ordering.

Driving Sales

Activity: Forecasting

Read the questions below and circle the correct answer.

1: If your sales for bagged salad were $18,000 last year and $19,800 this year, what is your increase over last year?

A. $18
B. $180
C. $1,800
D. $18,000

2: If you did $18,000 last year and this year you did $19,800 in sales of bagged salad, what is the percentage increase in sales over last year?

A. 1%
B. 10%
C. 100%
D. 1,000%

Driving Sales

Activity Answers

Review the following correct answers and check them against your responses.

1: C. $1,800

Deduct last years sales from this years sales; $19,800 - $1,800.

2: B. 10%

Divide the increase in sales by last years sales and multiply by 100. $1,800 ≈ $18,000 = 0.01. Then 0.01 x 100 = 10%.

Driving Sales

Interview Your Manager

In order to gain more insight into how you can improve the accuracy of your ordering through forecasting, interview your manager by asking the following questions.

Q: What kind of forecasting do we do for our department? How often do we forecast?

_____

_____

_____

_____

_____

Q: Can you share some documents with me that show the percentages of increase (or decrease) in the different produce items we carry?

_____

_____

_____

_____

_____

Q: What type of forecasting can I do in order to improve the accuracy of my ordering?

_____

_____

_____

_____

_____

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On-the-Job Learning Exercise: Forecasting

on-the-job training

Your goal is to practice forecasting sales. With your manager, choose two produce items in your department. For each item determine the direction of your sales and also the percentage of increase or decrease. You can refer to the example of how to complete these calculations on pages 21 - 22.

Produce Item One:

Sales for current year:

Sales for the previous year:

Change in sales (increase or decrease):

Change in sales divided by previous years sales:

Percent of increase or decrease:

Produce Item Two:

Sales for current year:

Sales for the previous year:

Change in sales (increase or decrease):

Change in sales divided by previous years sales:

Percent of increase or decrease:

How will this information help you place more accurate orders for the products you have analyzed?

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Controlling Shrink

Impact on Profit

Because grocery stores make their money on the volume of sales, one of the largest variables that can make or break the success of a store is shrink.

WHAT IS SHRINK?

Shrink is the difference between the amount of profit that should be made and the actual profit made.

For example, let's say you should realize $10 in profit on oranges. However, you lose several oranges to spoilage and this reduces your actual profit to $8. Your shrink total is then $2.

Here are some things that can have a big impact on your shrink:

- Improper ordering
- Improper receiving and storing
- Poor preparation and rotation of produce in displays
- Shoplifting
- Pricing errors

Controlling Shrink

Activity: Tips and Guidelines

The following pages contain tips and guidelines for controlling shrink. Place a check mark next to the tips or actions you already take to control shrink. Place a star next to the ideas you plan to implement when you return to the job. On page 32 there is space for you to jot down your insights and ideas after reading this section.

Ordering Tips

Sales can fluctuate significantly from one day to the other and one season to another. Things such as holidays, weather events, community events, and even what's reported on the news can significantly shift daily sales and inventory.

Produce is largely an impulse sale. For example, if you have many more customers in the store buying supplies for a predicted storm, you could have many more sales in your produce department. So when you are creating your forecasts, consider both daily inventory as well as trends and time of year.

- ❑ **Balance daily inventory needs and on-hand inventory** (i.e., amounts of product carry-over) when you put together your orders. For example, consider how much product you have on-hand (both on display and in storage) and when your next deliveries are scheduled.

- ❑ **Using history as a guide for what to order is important to a point, but you should also look at current trends.** Consider the circumstances at your particular grocery store. For example, if the store closes down the road, you can probably expect a spike in customer traffic and you should increase your ordering accordingly. Likewise, if the holiday season is approaching, you should increase your ordering of seasonal items.

Controlling Shrink

Activity: Tips and Guidelines (continued)

Example

You regularly have 100 customers each week looking for broccoli. You have forecasted properly and need 10 cases to satisfy the demand of these 100 customers. This is a ratio of 10:1 (10 customers per case of broccoli).

Now a store down the street closes. Suddenly you have 140 customers who want broccoli. If you are unaware of the store closing and order the same 10 cases you have in the past, your new ratio would be 14:1 (14 customers per every case). You would not have enough stock to satisfy this new demand and you would lose sales.

Receiving Tips

- ❑ **Quality:** Check the quality of all incoming product. Once you accept it, you own it. So accepting bad product will often result in shrink when that bad product fails to sell.
- ❑ **Circulation:** Another value to checking incoming product is that you need to judge where it should go in the product circulation. Date and rate the freshness or ripeness of each product so that you can make sure the oldest or most ripe product is displayed on the floor first.
- ❑ **Storage:** As soon as product arrives, put it into storage. Most produce needs to be stored below 50 degrees to slow the deterioration process. For example, mushrooms, berries and lettuce are very sensitive, so they need to be put into the cooler quickly.
- ❑ **Transport:** When transporting product to the cooler, always put the lighter product on top to prevent crushing. Also, remember not to drop shipping containers. For some items, a drop of even 6" can cause bruising.

Activity: Tips and Guidelines (continued)

Display Tips

- ❑ Check the temperatures of coolers and make sure misters are working properly. Keep cooler airflow free of debris. Keep balance in mind: well-stocked product will sell well, but too much stock will sit and age. Monitor your business levels and stock appropriately. Monitor air temperature in the produce area.
- ❑ Rotate product from the back and sides to the front and middle because these are the highest traffic areas.
- ❑ Cull regularly to remove unappealing product from displays. Although this product will have to be discarded as waste, studies show that customers buy more from an appealing display, meaning that discarding unappealing product drives sales.
- ❑ When culling the product, only trim what needs to come off. Keep in mind that over-trimming might reduce the weight of the product; and for items sold by weight, this will reduce your profit.
- ❑ Remember to keep volatile products, such as mushrooms and bananas, separate and away from moisture.
- ❑ Put ready-to-eat product out for samples.

Important Tip!

It's true that throwing away poor quality produce will increase your shrink numbers. However, since customers buy more from an attractive display, this increase in shrink is usually offset by the increase in sales.

Controlling Shrink

Activity: Tips and Guidelines (continued)

Example

If a customer walks into a store and sees a nice looking display of peaches, they may purchase a bag full of six peaches. However, if that same customer comes into the store and sees the peach display with some poor quality peaches on it, they are more likely to think all of the peaches are bad and not purchase any.

To determine the exact dollar amount lost, multiply the cost of your peaches by the number sold. If your peaches sell for .35¢ each: .35 x 6 = $2.10. Not only have you lost the sale of six peaches but now good quality peaches are being left on the display.

Eventually, these peaches will turn in quality as well. By not throwing away the poor quality peaches, you have lost sales and possibly increased your shrink to more than it would have been if you had properly culled the display.

Loss

- ❑ Although there will always be product loss, your goal should be to control it as much as possible. For example, do not take food for your own consumption.

Example

You might take an apple that cost you .15¢, but it would sell for .30¢. That's a loss of.30¢ to you in sales. Just one person, consuming one apple per day, working a five-day week, would cost the store $78.00 in sales.

Controlling Shrink

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Pricing

- We've all gone through a checkout line and met cashiers who will confuse expensive endive for wrinkled lettuce. Make sure all of your pricing is accurate and your codes are up-to-date.
- Being in an overstocked situation requires special efforts to maintain the desired profit. Whether it's creating secondary displays or trying to coordinate specials with other departments, reducing stock takes time and effort that could be spent increasing sales. In some situations, you may have to reduce pricing to move or clear the product. This will reduce your profit, but may help prevent you from having to throw away large amounts of the product. Making something is always better than making nothing.
- Remember to change system pricing when new product comes in and perform frequent produce training with the cashiers to make sure they are entering the right codes.
- Most importantly, even a few hours of incorrect pricing can add up to a big loss. Make sure you and your clerks are trained and always know the product cost for an item. Also, make sure your staff knows what to do if a pricing change needs to happen when you are not there.

Additional Notes – Actions You Will Take

_____

_____

_____

_____

_____

_____

_____

_____

Controlling Shrink

Interview Your Manager

In order to learn more about what you can do to control shrink at your store, interview your manager by asking the following questions.

Q: How has our department performed lately regarding shrink? What numbers can you share with me?

_____

_____

_____

_____

Q: What kind of experiences have you had in dealing with shrink in our department? What lessons have you learned about how to control shrink?

_____

_____

_____

_____

Q: What circumstances or events (such as holidays, a predicted storm, etc.) impact our ordering of produce items and our shrink? How do we plan ahead for these events?

_____

_____

_____

_____

Q: How well has our department controlled product loss in the past? What steps do you take to reduce or avoid product loss or spoilage?

_____

_____

_____

_____

Placing Orders

Not an Exact Science

Knowing how to place an accurate order is not so much an exact science as it is an evolving process.

Accurate Ordering

Placing an accurate order requires combining an understanding of your on-hand inventory and projected sales. In other words, you need to know how much inventory has moved since your last delivery and order enough to provide for the customers you are expecting over the next few days.

It's generally recommended that you keep a certain level of safety stock on hand to help you deal with any unexpected surprises (10 - 15% is generally a good starting point).

HELPFUL HINT

Remember, safety stock should not be used to rescue you from inaccurate ordering, because if you can't sell your safety stock it will quickly turn into harmful shrink.

A Sample Order: Step 1

It's Monday morning and time to place your order for lemons. Before you can write your order, you need to go back and see what you have on-hand. Let's say you have two cases in the back and your stand, which holds one case, is full. That means you have a total of three cases in the store already.

Placing Orders

A Sample Order: Step 2

The next step is to determine when your next shipment arrives. For this example, let's say your shipments come on Tuesdays and Thursdays. Your next shipment would arrive on Tuesday. You then compare the difference between what you have on-hand and what you expect to sell before the shipment arrives.

Because the order you write today must carry you through until Thursday's shipment, you now need to know how many lemons you will sell on Monday, Tuesday and Wednesday. According to your sales history, on most Mondays you sell two cases, Tuesdays three cases, and Wednesdays three cases as well. This means you can expect to sell eight cases of lemons before your next shipment arrives.

Inventory Tip

Many companies can keep track of sales records through their scanning. This means that you would be able to determine how much of a product you sell each day of the week by simply looking at scan data.

A Sample Order: Step 3

Now that you've gathered your information, you are ready to write the order. If you expect to sell eight cases of lemons before your next shipment arrives, and you have three cases on hand, that means you need to order five cases of lemons. But let's not forget about our safety stock. If we factor in one case for safety stock, our new order total is six cases.

Placing Orders

e-ssentials

On-the-Job Learning Exercise: Writing Accurate Orders

on-the-job training

Your goal is to practice writing accurate orders for different types of produce items. Choose four produce items that you need to order (such as cases of lemons). Then complete Steps 1 - 3 (see pages 34 - 35) to determine how much of that item you should order for the next shipment. Record the information below.

Produce Item One:

Step 1: Determine what you have on-hand.

Step 2: Determine how much of that item you will sell before the next shipment.

Step 3: Determine how much of the item to order, including safety stock.

Produce Item Two:

Step 1: Determine what you have on-hand.

Step 2: Determine how much of that item you will sell before the next shipment.

Step 3: Determine how much of the item to order, including safety stock.

Placing Orders

on-the-job training

On-the-Job Learning Exercise: Writing Accurate Orders (continued)

Produce Item Three:

Step 1: Determine what you have on-hand.

Step 2: Determine how much of that item you will sell before the next shipment.

Step 3: Determine how much of the item to order, including safety stock.

Produce Item Four:

Step 1: Determine what you have on-hand.

Step 2: Determine how much of that item you will sell before the next shipment.

Step 3: Determine how much of the item to order, including safety stock.

Performing Calculations

Activity: Performing Calculations

Instructions: The following are some calculations that you will be expected to perform as a produce manager. This activity gives you an opportunity to practice performing the calculations. Read each situation and then answer the question that follows.

Situation 1 – Determining Shrink

There is a manager who consistently orders twenty cases of lettuce, based on customer demand. He pays $20 for each case and sells each case for $40, which is a profit of $20. For the last couple of weeks there has been road construction in front of the store, which has slowed customer traffic.

However, the manager continues to order twenty cases of lettuce. Because of the slower customer traffic, the manager is not able to sell all twenty cases and has to cut the price on the lettuce to $20 per case. This means he is selling the lettuce at cost. At the reduced price, he is able to sell seventeen cases of lettuce.

To determine the actual shrink on lettuce, we would first consider the cases sold versus the cases ordered: twenty cases ordered minus seventeen cases sold equals three cases.

Next, we would consider the money lost on these three cases. This manager not only lost the $20 he paid for these three cases, he also lost the $20 in profit he would have made on them. This means his actual shrink on the three unsold cases is $120 ($40 x 3). Since the manager sold the other seventeen cases at cost, that means he lost his profit on those cases too.

Q: Which of the following is the actual shrink for this managers twenty cases of lettuce?

A. $120

B. $171

C. $460

D. $800

Performing Calculations

Activity: Performing Calculations (continued)

Situation 2 – Sales Per Customer

Understanding the sales per customer will help you and your staff understand the actual amount of money each customer in your department represents. To determine the sales per customer, you would divide your stores sales by the number of customers. Most registers log the number of transactions, which will give you an idea of how many customers you had on a given shift.

Q: Let's say your store had 16,000 transactions per customers last week and a total of $240,000 in sales. What would be your sales per customer?

A. $15

B. $17

C. $25

D. $28

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Activity: Performing Calculations (continued)

Situation 3 – Sales Per Customer

One of the costly – and potentially profitable – parts of your department is your staff. Most produce departments have a goal of 100 - 120 sales dollars for each labor hour worked. Be sure you know what your goal is for each day and each week so you can determine how many labor hours should be scheduled.

Example

If you are projecting $1,000 in sales, you would need to schedule 10 labor hours. Scheduling the right number of labor hours is crucial to profitability. If you over-schedule, you lose money on the labor dollars that are not being accounted for in sales. If you under-schedule, you risk losing out on sales due to poorly stocked and displayed items.

Sales per labor hour is an important calculation because this figure will help you determine if your scheduling is on track. To determine sales per labor hour, you would divide your sales by the number of labor hours worked.

Q: Let's say your department did $17,500 last week and you had 150 labor hours worked. If we round up to the nearest dollar, what would be your sales per labor hour?

A. $100
B. $117
C. $123
D. $147

Performing Calculations

Activity: Performing Calculations (continued)

Situation 4 – Labor Percentage

To understand if your labor costs are increasing or decreasing your profits, you will want to be able to calculate the percentage of sales you are spending on labor. That calculation is called the labor percentage. To determine your labor percentage, you need to divide your labor cost by your sales.

Q: Let's say your labor costs were $1,500 last week and your department did $17,500 in sales. What would be your labor percentage?

A. 11%

B. 7%

C. 4%

D. 9%

Important Tip

In addition to the common calculations, it's important that you know your companys standard profit margin percentage so that you know how to price an item in an emergency.

Example

Let's say your e-mail goes down, resulting in your store not getting the weekly pricing updates for some of your items. Knowing your companys standard profit margin will help you price the items as close to correct as possible to ensure you don't lose money.

Performing Calculations

Activity Answers

Review the following correct answers and check them against your responses.

Situation 1: C. $460

You arrive at this number by multiplying 17 by $20, which is the profit lost on the 17 cases (17 x $20 = $340). You then add $340 to $120 (the loss on the unsold cases), which gives you $460.

Situation 2: A. $15

You arrive at this number by dividing your sales by the number of transactions or customers ($240,000 ÷ 16,000 = $15).

Situation 3: B. $117

You arrive at this number by dividing your sales by the number of labor hours worked ($17,500 ÷ 150 = $117). If your goal is to have between $100 - 120 of sales per labor hour worked, you can consider last week a scheduling success!

Situation 4: D. 9%

You arrive at this number by dividing your labor cost by your sales ($1,500 ÷ $17,500 = .09).

Performing Calculations

On-the-Job Learning Exercise: Calculations for Your Store

Your goal is to practice making calculations that are specific to your job or department. See pages 39 - 41 for examples of these calculations.

Sales Per Customer

Calculate the sales per customer for last week for your store.

Sales Per Labor Hours

Calculate the sales per labor hour for your department last week.

If your goal is to have between $100 - 120 of sales per labor hour worked, how successful was your scheduling?

Labor Percentage

Calculate your labor percentage for last week, for your department.

Glossary of Terms

Bottom Line Profit: The amount you made from the sale of an item (also referred to as profit); top line sales minus product cost equals bottom line profit.

Food Cost: The calculation that gives you the profit you will make on a particular food item; product cost divided by top line sales equals food cost.

Food Cost Percentage: The calculation that gives you the percentage of food cost related to sales; product cost divided by sales, and then multiplied by 100 equals food cost percentage.

Labor Hour: The cost of staffing your department.

Labor Percentage: The percentage of sales you are spending on labor; labor cost divided by sales equals labor percentage.

Product Cost: What you paid for an item.

Safety Stock: Extra inventory kept on hand in case of unanticipated demand, shrink, or delayed delivery of a planned order.

Sales Per Customer: The actual amount of money each customer spends in your department or store; store or department sales divided by the number of customers equals sales per customer

Sales Per Labor Hour: A calculation used in determining net profit that tells you how much it cost you in labor to sell your product; sales divided by labor hours equals sales per labor hour.

Shrink: The difference between the amount of profit that should be made and the actual profit made

Static Ordering: Ordering exactly the same quantity of an item throughout the year, with the same frequency.

Top Line Sales: The total dollars spent by your customers (also referred to as sales); called top line sales because *sales* appears on the top line of an income statement.

Activity Completion and Sign-off

The purpose of the module was to provide you with some hands-on experience with performing calculations that are important to your business. Specifically, you should feel confident in your ability to forecast sales, control shrink, write accurate orders and effectively schedule employees.

Activities to Complete

On-the-Job Learning Exercises	Trainer Initials	Trainee Initials
Forecasting *(page 24)*		
Writing Accurate Orders *(page 34)*		
Calculations for Your Store *(page 41)*		

Manager Interviews	Trainer Initials	Trainee Initials
Law of Diminishing Returns *(page 15)*		
Driving Sales *(page 23)*		
Controlling Shrink *(page 31)*		

Trainee Signature

Manager Signature

Date

Date

Future Learning and Development Plan

Naturally, there are bound to be some tasks related to Supermarket Math that you are more confident in than others, as learning is a continual process based on experience and practice. Your manager will provide you with specific development goals based on your performance throughout this program. You and your manager will take these ideas and create a development plan together (see next page).

Trainee Signature

Manager Signature

Date

Date

Development Plan

Name: _____ Date: _____

Development Goal	Actions to Take	Team Member Mentor	Follow-up Date	Completed (Mgr Initial)

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