

Activity: Warehouse Receiving Calculations

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_**

***Objective****: Students will be able to use the tihi formula to calculate the number of cases on a pallet, solve multi-step warehouse storage problems, and compute and reconcile inventory data.*

***Workplace Scenario:*** *You are a supervisor at BSP Warehouse and Distribution, Inc. Your warehouse provides storage and distribution services for several vendors throughout the Midwest. One of your primary responsibilities is to train and supervise the shipping and receiving clerks who work at your warehouse. This week you are training Juan, a new employee, on receiving, storage, and inventory procedures.*

***Directions****: Complete the following Warehouse Receiving calculations. After you have completed assignment, turn it in and take the Quiz. Assignment is worth* ***60 points*** *– Quiz is worth* ***40 points.***

**Part I: Checking in Deliveries with Tihi**

Juan checked in the following deliveries this afternoon. Use the tihi formula to calculate the number of cases contained on each pallet and complete the delivery log with all the required information.

1. Item #005 8” steel bolts tihi 16:4

2. Item #006 10” steel bolts tihi 12:4

3. Item #112 12” hoses tihi 4:7

4. Item #106 6” hoses tihi 6:8

5. Item #025 Sensors tihi 8:12

6. Item #152 Gaskets tihi 8:7

7. Item #004 6” clamps tihi 18:4

8. Item #214 Rubber seals tihi 12:7

9. Item #035 Switches tihi 18:5

10. Item #202 Valves tihi 8:4

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| --- | --- | --- | --- |
| **Date: 01/16/15** |  | **Delivery Check-in Log** | **Checked by: Juan G** |
| **Received from: Our Company, Inc.** |
| **Item** | **Description** | **Del. Ticket Quantity (cs)** | **Ti x Hi** | **Ti Hi Quantity (cs)** | **√ or +/-** |
| 005 | 8” steel bolts | 64 | 16 x 4 | 64 | √ |
| 006 | 10” steel bolts | 48 |  |  |  |
| 112 |  |  |  |  |  |
| 106 |  |  |  |  |  |
| 025 |  |  |  |  |  |
| 152 |  |  |  |  |  |
| 004 |  |  |  |  |  |
| 214 |  |  |  |  |  |
| 035 |  |  |  |  |  |
| 202 |  |  |  |  |  |

**Part II: Warehouse Storage Calculations**

*You explain to Juan that he will need to calculate the amount of storage space required for incoming shipments. He must also check the computer to determine in what section of the warehouse the products will be stored and if there is sufficient storage space available in that section. Perform the storage calculations for each of the following deliveries.*

1. a. You will be receiving a shipment of 168 cases of item #203; there are 28 cases on each pallet. The pallets are to be stored in section D1 of the warehouse. If 4 pallets fit on a storage rack, how many racks will you need for the 168 cases?

b. If there are 4 racks available in section D1, how many open racks will remain after storing the 168 cases?

2. a. You will be receiving a shipment of 240 cases of item #204; there are 48 cases on each pallet. The pallets are to be stored in section D2 of the warehouse. If 2 pallets fit on a storage rack, how many racks will you need for the 240 cases?

b. If there are 6 racks available in section D2, how many open racks will remain after storing the 240 cases?

3. a. You will be receiving a shipment of 768 cases of item #205; there are 96 cases on each pallet. The pallets are to be stored in section D3 of the warehouse. If 4 pallets fit on a storage rack, how many racks will you need for the 768 cases?

b. If there are 5 racks available in section D3, how many open racks will remain after storing the 768 cases?

4. a. You will be receiving a shipment of 504 cases of item #207; there are 72 cases on each pallet. The pallets are to be stored in section D4 of the warehouse. If 4 pallets fit on a storage rack, how many racks will you need for the cases?

b. If there are 4 racks available in section D4, how many open racks will remain after storing the 504 cases?

5. a. You will be receiving a shipment of 384 cases of item #210; there are 32 cases on each pallet. The pallets are to be stored in section D5 of the warehouse. If 2 pallets fit on a storage rack, how many racks will you need for the cases?

b. If there are 8.5 racks available in section D5, how many open racks will remain after storing the cases?

**Part III: Counting Inventory**

*You tell Juan that another responsibility he has as a clerk is to take inventory of the products on hand. Every week, products from different storage sections of the warehouse are physically counted and reconciled with the inventory listed in the company’s computer database. This week, you will be counting the inventory in section D of the warehouse. Calculate the inventory for the following products and complete the inventory log*.

1. Item #203 1 full pallet and 22 cases; pallet tihi 4:7; 6 units per case

2. Item #204 3 full pallets and 5 cases; pallet tihi 6:8; 12 units per case

3. Item #205 2 full pallets and 20 cases; pallet tihi 8:12; 4 units per case

4. Item #206 3 full pallets and 4 cases; pallet tihi 8:7; 6 units per case

5. Item #207 1 full pallet and 14 cases; pallet tihi 18:4; 12 units per case

6. Item #208 2 full pallets and 6 cases; pallet tihi 12:7; 10 units per case

7. Item #209 4 full pallets and 10 cases; pallet tihi 18:5; 2 units per case

8. Item #210 3 full pallets and 28 cases; pallet tihi 8:4; 12 units per case

9. Item #211 2 full pallets and 30 cases; pallet tihi 12:4; 6 units per case

10. Item #212 6 full pallets and 12 cases; pallet tihi 10:4; 8 units per case

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| **INVENTORY LOG** |
| Date: | 01/19/95 |  |  |  |
| Name: | Juan G. |  |  |  |
| Location: | F12 |  |  |  |
|  |
| **Item Number** | **Quantity Listed on Inventory (units)** | **Actual Inventory Count (units)** | **Inventory Verified****(√)** | **+/-** |
| 201 | 1260 | 1260 | √ |  |
| 202 | 804 | 800 |  | -4 |
| 203 | 300 |  |  |  |
| 204 | 1788 |  |  |  |
| 205 | 850 |  |  |  |
| 206 | 1030 |  |  |  |
| 207 | 1032 |  |  |  |
| 208 | 1740 |  |  |  |
| 209 | 740 |  |  |  |
| 210 | 1488 |  |  |  |
| 211 | 756 |  |  |  |
| 212 | 2016 |  |  |  |