***Stel Weight Exercise***

Use the chart on the next page to calculate the weights for the following problems.

1. **How much does a 4’x4’x1/4 plate weigh?**
2. If you could haul 7,000 pounds on a tandem axle trailer, **how many sheets of 4’x10’x ½” plate can you carry in one load?**
3. An Ag Shop student needs to move a piece of 1” plate to the welding table. The plate dimensions are **3 ft. by 5 ft.** **How much does the plate weigh?** Can the student pick up the piece and move it safely by him or herself?
4. An Ag student is building a square metal bin, **how much material is going to be put into the project if the dimensions are:**

 **Floor: 3’ by 3’**

 **Sides: 3’ by 3’**

 The project is square and has four sides, calculate the amount of material. **How much does the project weigh if the metal plate is 3/8” thick.**

**Material Weights per Square Foot**

**Plate**

|  |  |
| --- | --- |
|  **Plate Thickness** | **Lbs / Sq Ft** |
| 1/4 " | 10.2 lbs / sq ft |
| 3/8 " |  15.3 lbs / sq ft  |
| 1/2 " | 20.4 lbs / sq ft |
| 1 " | 40.8 lbs / sq ft |

**Sheets**

|  |  |  |  |
| --- | --- | --- | --- |
| **Thickness** | **4' X 8'** | **4' X 10'** | **4' X 12'** |
| 1/4 " | 326.4 lbs | 408 lbs | 489.6 lbs |
| 3/8 " | 489.6 lbs | 612 lbs | 734.4 lbs |
| 1/2 " | 652.8 lbs | 816 lbs | 979.2 lbs |
| 1 " | 1305.6 lbs | 1632 lbs | 1958.4 lbs |