

Name _____

Lab # 12 -- Sheet Metal Feed Scoop

Description: The feed scoop is a project involving skills in layout, sheet metal construction and wood construction.

Materials:

- 24-26 ga. galvanized sheet metal
- #3 common pine
- 1" Hardwood dowel
- 3d Box Nails
- #8x1 1/2" pan head screw

Tools:

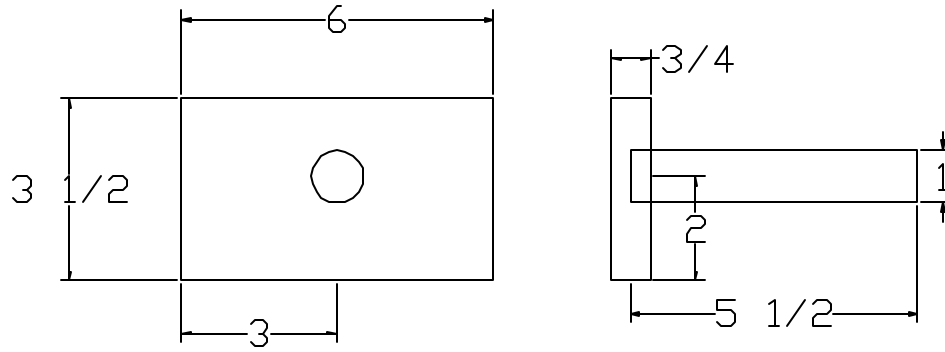
- Snips
- Shear
- Sheet Metal Brake
- Sheet metal punch
- Table Saw/Cut-off Saw
- Drill Press
- 1" Forstner or Spade bit
- Combination Square
- Dividers
- Scribe

Directions:

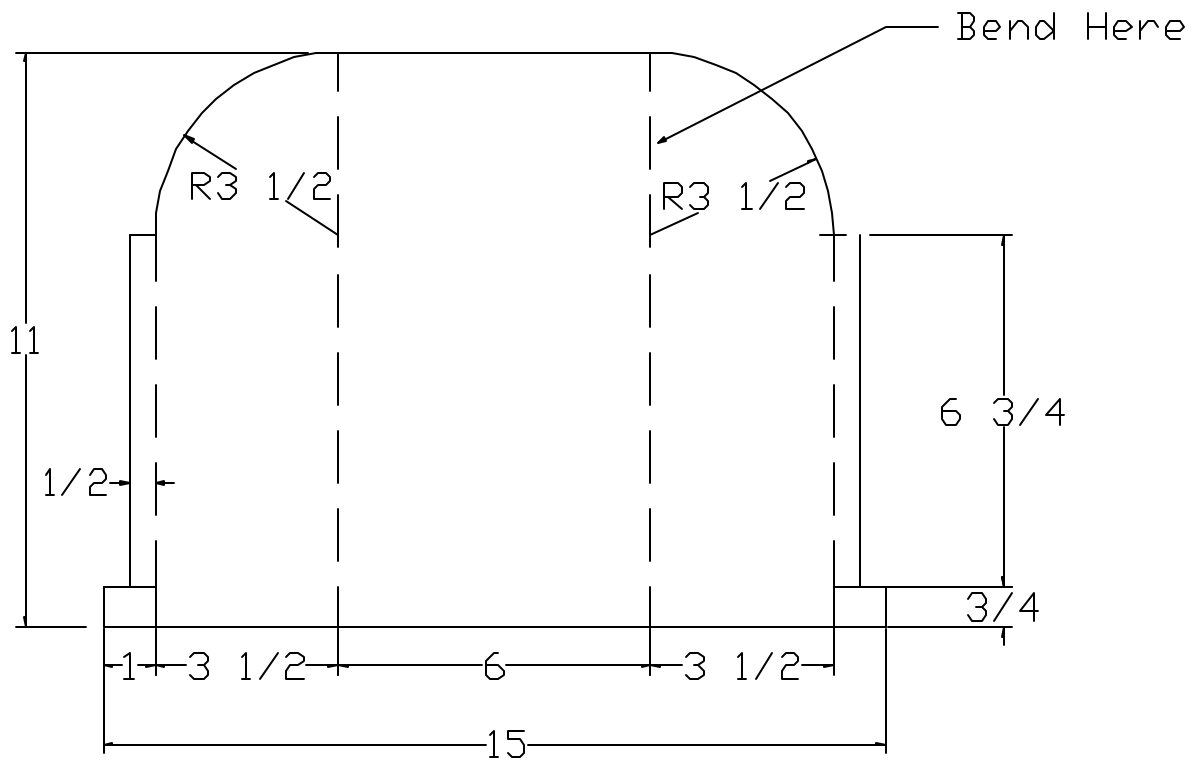
1. Layout the sheet metal scoop as shown in the diagram and cut out.
2. Fold the top edges of the scoop with the brake.
3. Break the "ears" to a 90° angle and then break the main corners.
4. Cut the back of the scoop from the wood provided on the table saw or cut-off saw.
5. Locate the center of the handle and drill the 1" hole for the handle 3/8" deep. Drill a 3/16 hole in the center of the 1" hole, completely through the wood.
6. Cut the 1" dowel to length and bevel one end.
7. Cut a 1" square of sheet metal from scrap. Mark the center of the square. Punch a 3/16" hole in the center.
8. Assemble the handle to the back using glue, the 1" square washer, and a #8x1 1/2" screw.
9. Assemble the back and body of the scoop. Use the nails to secure the body to the back (Use 2 on the top, 2 on each side, and 3 on the bottom), pre-drill if necessary.

Grading:

| Criteria (Tolerance +/- 1/6") | Possible | Score |
|---------------------------------|-----------|-------|
| Scoop Length | 4 | |
| Width | 4 | |
| Height | 4 | |
| Handle fit and location | 4 | |
| Quality of bends | 6 | |
| Fit between wood and metal | 4 | |
| Workmanship (appearance, nails) | 4 | |
| TOTAL | 30 | |



Handle Detail
Materials: 3/4" pine, 1" dowel



Feed Scoop Sheetmetal Layout
Materials: 24-26 ga. steel

Feed Scoop
Drawn by: M. Spiess
Date: 09/04/98
Materials: Sheet metal and wood.