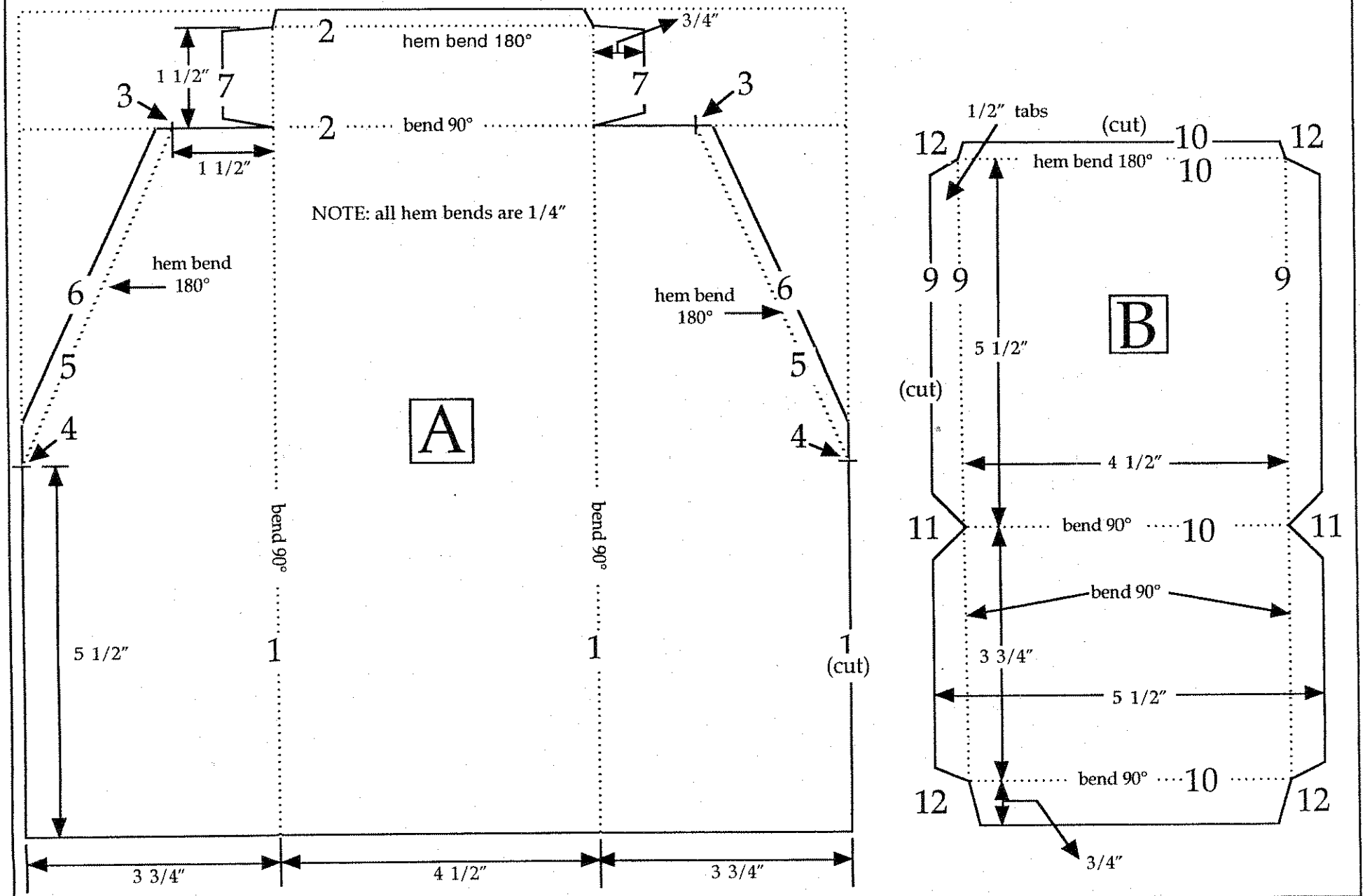

HILMAR METAL WORKS	11/96	BOLT BIN	SCALE: 1" = 2"

AG MECHANICS SKILLS I
SHEET METALWORK
BOLT BIN INSTRUCTIONS

Name _____

Date _____

To assist you in laying out your Bolt Bin plans on the sheet metal, follow these instructions step by step. Each step refers to specific lines.

Materials: 24 Ga. Sheet Metal 18" X 12"; 12" Rule; Nail; Work Board; Bolt Bin Plans

#	LAYOUT
1.	Draw vertical lines from top to bottom (measure from the left edge of the metal).
2.	Draw horizontal lines as shown (measure from the top edge of the metal).
3.	Make marks 1 1/2" from the vertical lines (1) as shown.
4.	Make marks 5 1/2" along the vertical lines as shown (measure from the bottom).
5.	Join marks 3 and 4 (both sides).
6.	Draw second line as shown, 1/4" from line #5.
7.	Draw the tab lines 3/4" from the vertical lines as shown.
8.	Finish tabs by adding the angled lines as shown. These lines should be drawn at a slight angle.
9.	Draw these vertical lines, measuring from the right edge of the metal.
10.	Draw these horizontal lines as shown (Measure from bottom edge of metal).
11.	These tab lines need to be sharp (at least 45 degrees)
12.	Finish the layout by adding these tab lines. They should be at a slight angle.

CUTOUT

1. Using the sheet metal foot shear, cut the two pieces apart (along the rightmost line #1). Also, trim along lines #6, #9, and #10.
2. Using the tin snips, cut around all tabs.

BENDING

PART A

1. Complete all hem bends first. These should be flattened all the way over (180).
2. Next, bend along the vertical lines (#1) to 90 degrees.
3. Next, bend along line #2 to 90 degrees. Make sure the tabs go on the outside of the sides of the box.

PART B

4. Next, bend the tab lines (#9) to 90 degrees.
5. Next, bend along lines #10 to 90 degrees each.

ASSEMBLY

1. Now the two pieces should fit together to form the box. before you spot weld it together, make sure all rough edges and burrs are flattened and filed smooth.
2. The instructor will help you weld it together.
3. After assembly, check again for sharp edges and file smooth as necessary.

revised 11/96

AG MECHANICS SKILLS 1
BOLT BIN PROJECT
SCORECARD

NAME _____

DATE _____

I.D. # _____

	CRITERIA	POINTS POSSIBLE	POINTS EARNED
1.	Project layout (accurate measurements)	20	
2.	Project cutout (accuracy & quality of cuts)	20	
3.	Quality of metalworking (Bends)	20	
4.	Project assembly (correct use of spot welder)	10	
5.	Project finish (dents or scratches).	10	
6.	Were directions followed?	10	
7.	Was project completed on time?	10	
	TOTAL	100	

OVERALL PROJECT GRADE _____

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