



2002 State Competition
FFA Agricultural Mechanics Contest
University of Missouri
50 points

Contestant # _____
Contestant Name _____
Chapter _____

Oxy-Acetylene

Problem:

This activity will require you to cut a 45-degree bevel, cut straight down through the metal, cut out 1-inch diameter circle free handed, and mark where the metal should be bent.

Materials:

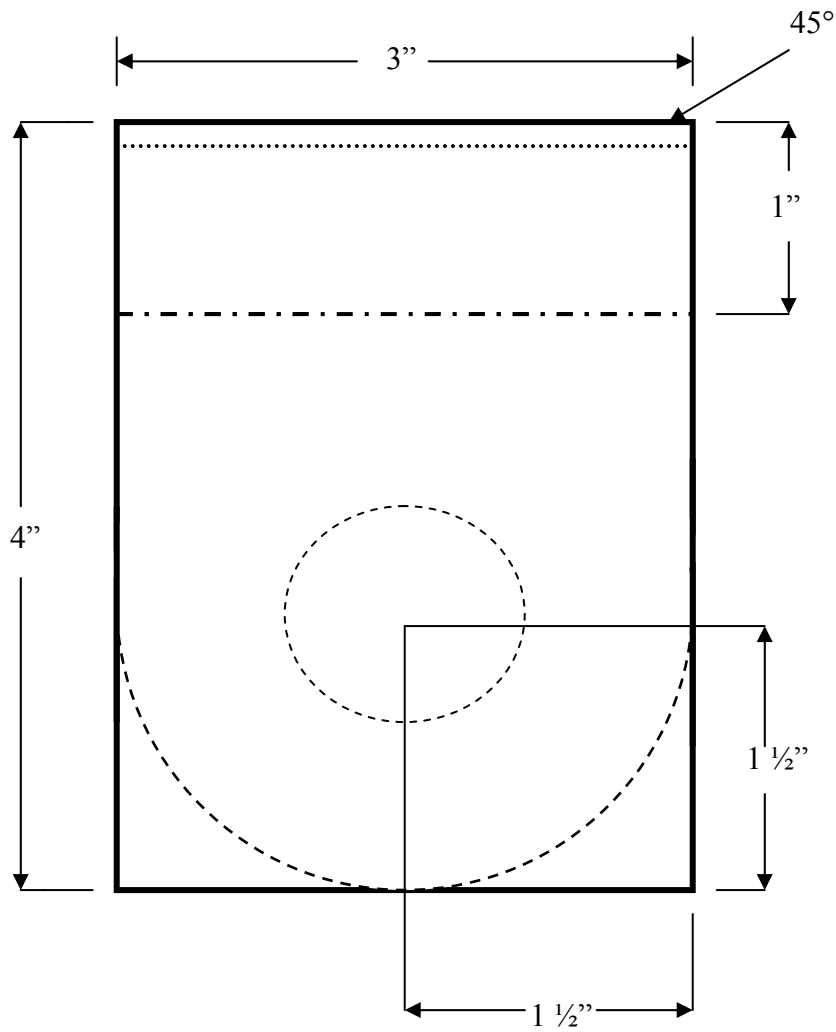
1. ¼ inch x 3 inch x 4 inch hot rolled steel
2. Cutting attachment
3. Striker
4. Chipping hammer
5. Wire brush
6. Combination square
7. Pliers
8. Soapstone

Directions:

1. Secure metal from contest official.
2. Use soapstone and combination square to mark cut locations. (use diagram on next page)
3. Cut 1 inch circle as indicated.
4. Make rounded cut on end as indicated.
5. Position and cut 45 degree bevel.
6. Cool metal thoroughly.
7. Clean cuts with chipping hammer and wire brush.
8. Mark location for metal to be bent.
9. Use masking tape provided to tape scorecard to metal.
10. Submit metal and this sheet to contest official.

Evaluation Criteria

	Points Possible	Points Earned
1. Hole positioned properly.	5	_____
2. Hole is 1" in diameter.	6	_____
3. Bevel is 45°.	6	_____
4. Plate is rounded properly.	6	_____
5. Mark for bend is in proper position.	3	_____
6. Uniformity.	6	_____
7. Use of correct flame type.	5	_____
8. Safety, work habits.	3	_____
9. Points from identification and general questions.	10	_____
Total Points	50	<input type="text"/>



1. Which line carries oxygen?
 - a. 1
 - b. 2

2. The part tagged #2 is a/an _____.

3. What shade lens is suitable for oxy-acetylene welding?
 - 3a.
 - 3b.
 - 3c.
 - 3d.

4. What are the dimensions (to the nearest 1/8 inch) of the piece of steel labeled #4?
 _____ x _____ x _____

5. What is the size of the tip labeled #5?

6. Which torch attachment would be best for brazing 12 gauge steel?
 - 6a.
 - 6b.
 - 6c.
 - 6d.

7. Which tank contains acetone?
 - a. 1
 - b. 2

8. The rod labeled #8 is made of what kind of material?
 - a. steel (stainless)
 - b. brass
 - c. bronze
 - d. steel (mild)

9. The tool labeled #9 called a/an _____.

10. The gauge labeled #10 indicates the pressure in:
 - a. the oxygen line.
 - b. the acetylene line.
 - c. the oxygen tank.
 - d. the acetylene tank.