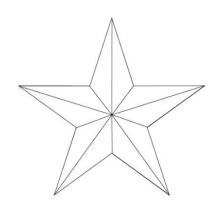


## **Create a Metal Barn Star**

Items needed: Sharpie pen, straight edge, sheet metal, tin snips, soldering gun, metal sandpaper, paint for metal, and painter's tape (optional). For safety, leather gloves should be worn while cutting and folding metal; and safety glasses need to be worn throughout the entire project.

Instructions: Create a kite shape pattern to use as a guide for the 5 points. See pattern below as an example. The length of the longest line will be the radius of the star. The longer the middle line, the larger the star and materials to be used.



Make a pattern on a sturdy type of paper, such as poster board. You will need a total of five identical kite-shaped pattern pieces.

Once the patterns are drawn out, carefully cut out sheet metal. You should wear a pair of leather gloves, as metal may be sharp (and, of course, safety glasses). \*

Fold each metal kite-shaped piece along the long center line to an approximately 90 degree angle. You can easily do this by pressing the metal down, over the edge of a table or a piece of wood.

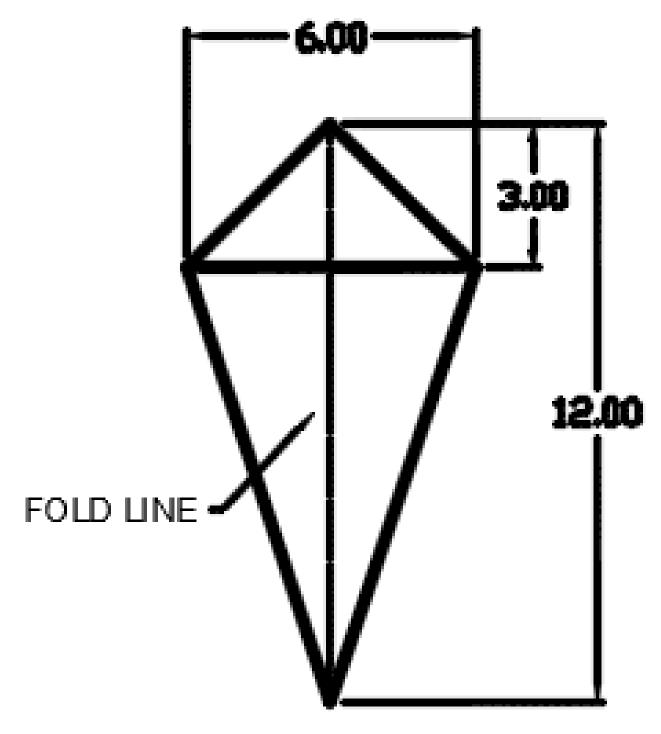
Put the short sides of two kite-shaped pieces together and solder. Continue adding the short sides until it forms a star. Pay close attention to where the centers meet. (Try not to leave a hole in the center. You can fill in if needed by building up a few layers of solder in the center)

When finished with soldering, take the metal sandpaper and clean up edges where soldering ended. It is helpful to fold the sandpaper to a crease, or use a scrap piece of wood to wrap around paper to create an edge to smooth interior corners.

To finish, paint with a paint made to adhere to metal. If using multiple colors, use painter's tape to cover unwanted areas for overspray. Allow 24 hours to dry.

To hang your star, you can drill a hole in one tip of the star, or solder a wire loop on the back.

\*Visit Alfred State's welding program and we can cut your shapes out on our plasma table.



Drawing is not to scale.