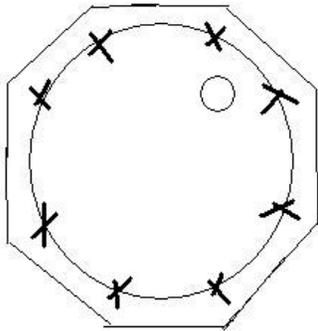
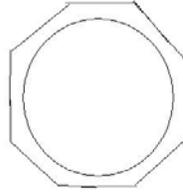


UBC Physics Hovercraft

1. Cut a 4ft x 4ft sheet of $\frac{1}{2}$ inch standard plywood into an octagon

2. Using “pex pipe” tubing, form a circular ring on top of the plywood such that there is about 0.5 to 1 inches from the edges of the octagon all the way around. The tubing ends can be connected with a wood dowel (with spiral cut).



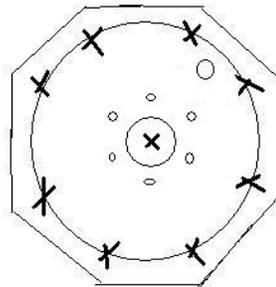
3. Cut out a 3.25 cm diameter hole into the plywood near the edge of the octagon such that it is within the tubing ring. It should be about 6 inches from the edge. Use sandpaper to smooth out the hole
4. Using 8 wood screws ($\frac{1}{2}$ inch long), attach the ring to the plywood octagon (on the bottom side such that ring keeps it's circular shape. (8 screws located at the corners of the octagon).

5. Cut a sheet of $4\frac{1}{4}$ x $4\frac{1}{4}$ ft plastic (clear heavy polyethylene) and trim off the corners such that it forms an octagon slightly bigger than the plywood. Place the plastic flat on the floor and the ring/plywood combination on top of that with ring down.

6. Using duct tape, fold down the plastic to the top side of the plywood (start with two sets of opposing sides as if you were taping down a square) Now tape down the other four sides until the plastic forms a tight seal all the way around the top. **It is very important that the plastic remains tight all the way around such that there are no “ripples” in the plastic when inflated.**

7. Using a $\frac{1}{2}$ inch wood screw, a small washer, a big washer and a CD, attach the middle of the plastic to the middle of the plywood.

8. Cut six small (1 inch diameter) circles out of the plastic using an exacto knife such that they surround the CD evenly. (about 1-1.5 inches from the edge of the CD)



*Note that diagrams are not to scale

List of materials:

1. Tubing 12 feet: Bow Superpex ½” .
2. Heavy plastic (barrier) sheet 6 by 6 feet
3. 1” dowel
4. 9 screws 10x1/2 flat head
5. Duct tape
6. 4ft x 4ft sheet of ½ inch standard plywood
7. Old CD or DVD
8. Washers
9. Shop vac or Leaf blower to power the Hovercraft