

Name _____
Lab # 8 -- Plumbing

Description: In this lab you will work with three common plumbing materials: galvanized pipe, copper pipe, and plastic pipe.

Materials:

7" - 1/2" Galvanized pipe
6" - 1/2" Copper Pipe
1 - 1/2" Copper Cap
1 - 1/2" Male Adapter
10"-1/2" PVC Pipe
2 - 1/2" PVC ST 90° Elbow

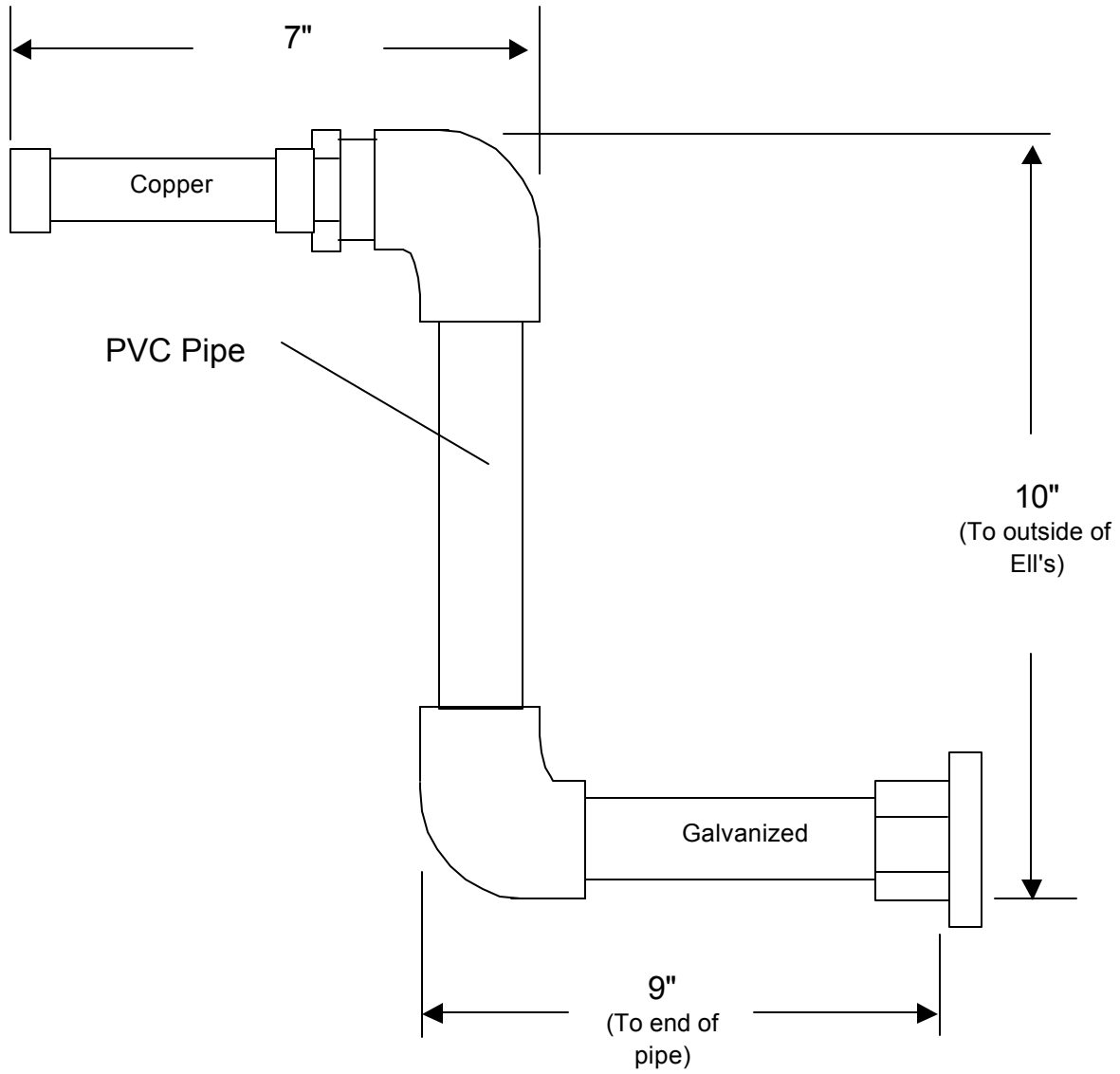
Tools:

Steel pipe cutter
Pipe Die
Pipe reamer
Hack Saw
Solder
Propane Torch
Acid and Brush
PVC Cement

Directions:

Read the directions before beginning the lab.

1. Note the completed project should lay flat (all pipes in the same plane).
2. Determine the correct length of 3/4" galvanized pipe to fit the diagram. Measurement is from the end of the pipe to the OUTSIDE of the PVC fitting. Assemble the pipe and fitting. Cut a _____" Galvanized Pipe nipple. Thread one end with the power threader, ream, and cut to length. Thread the other end by hand and ream. Assemble with the provided fitting using pipe sealant.
3. Cut a piece of 1/2" copper pipe _____" long to fit the diagram below using a hack saw. Measurement is from the OUTSIDE of the cap to the OUTSIDE of the PVC fitting. Length should be adjusted for the copper fittings and the depth the fitting will screw into the PVC Ell. Assemble the copper pipe and fittings. Solder the joint. Screw into the PVC Ell using pipe sealant.
4. Cut a piece of 3/4" PVC pipe _____" long to fit the diagram below. Dimensions are from the OUTSIDE of the fittings. Glue the joints.
5. Using pipe sealant, assemble the union half provided to your galvanized pipe. Assemble the union and pressure test your project. CAUTION: Add air slowly.
6. Have your pressure test checked and remove the union. Have your pipe length graded. Disassemble the project and tape together.



Not to Scale

Plumbing Project Grade Sheet

Grading:

Name:

| Criteria | Possible | Score |
|--|-----------|-------|
| Graded During Class: | | |
| Galvanized Pipe Length (+/- 1/8") | 2 | |
| Copper Pipe Length (+/- 1/8") | 2 | |
| PVC Pipe Length (+/- 1/8") | 2 | |
| Pressure Test (2 per joint, pass/fail) | 10 | |
| Graded Later: | | |
| Galvanized Nipple | | |
| Thread quality (machine thread) | 2 | |
| Reaming | 2 | |
| | | |
| Copper Fitting | | |
| Solder joint quality | 2 | |
| Cut square and deburred | 2 | |
| | | |
| PVC | | |
| Glue joint quality | 2 | |
| | | |
| Assembly/workmanship | 4 | |
| TOTAL | 30 | |