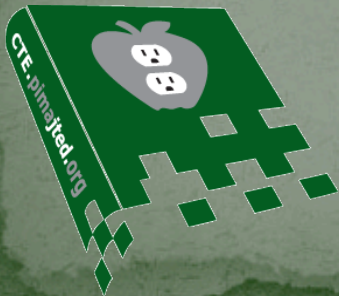


# Construction: Plumbing

## **DRAIN WASTE AND VENT SYSTEM**

**LESSON 11 OF 12**





# Bellwork

1. Name the three types of DWV piping we examined in the last lesson.
2. Besides the piping, what do we need in order to assemble a DWV system? Make a list.



# PowerPoint Graphic Organizer

1. Write the date
2. Write your first and last name
3. Write the class period

Fill in the above information on the cover sheet of your handout



# Preview Objectives

- Student will be able to prepare to assemble a soil, waste, and vent system by:
  1. Demonstrating how to complete a Safety Rubric observation.
  2. Identifying the steps in assembling a DWV System.

Underline key phrases and terms



# SAFETY

- You are expected to:
  1. Abide by all classroom safety procedures.
  2. Wear all your personal protective equipment at all times.
  3. Use all equipment appropriately and safely.
  4. Immediately follow any instructions from the teacher to avoid injury or damaging materials or tools.



# Safety Rubric

## Scoring:

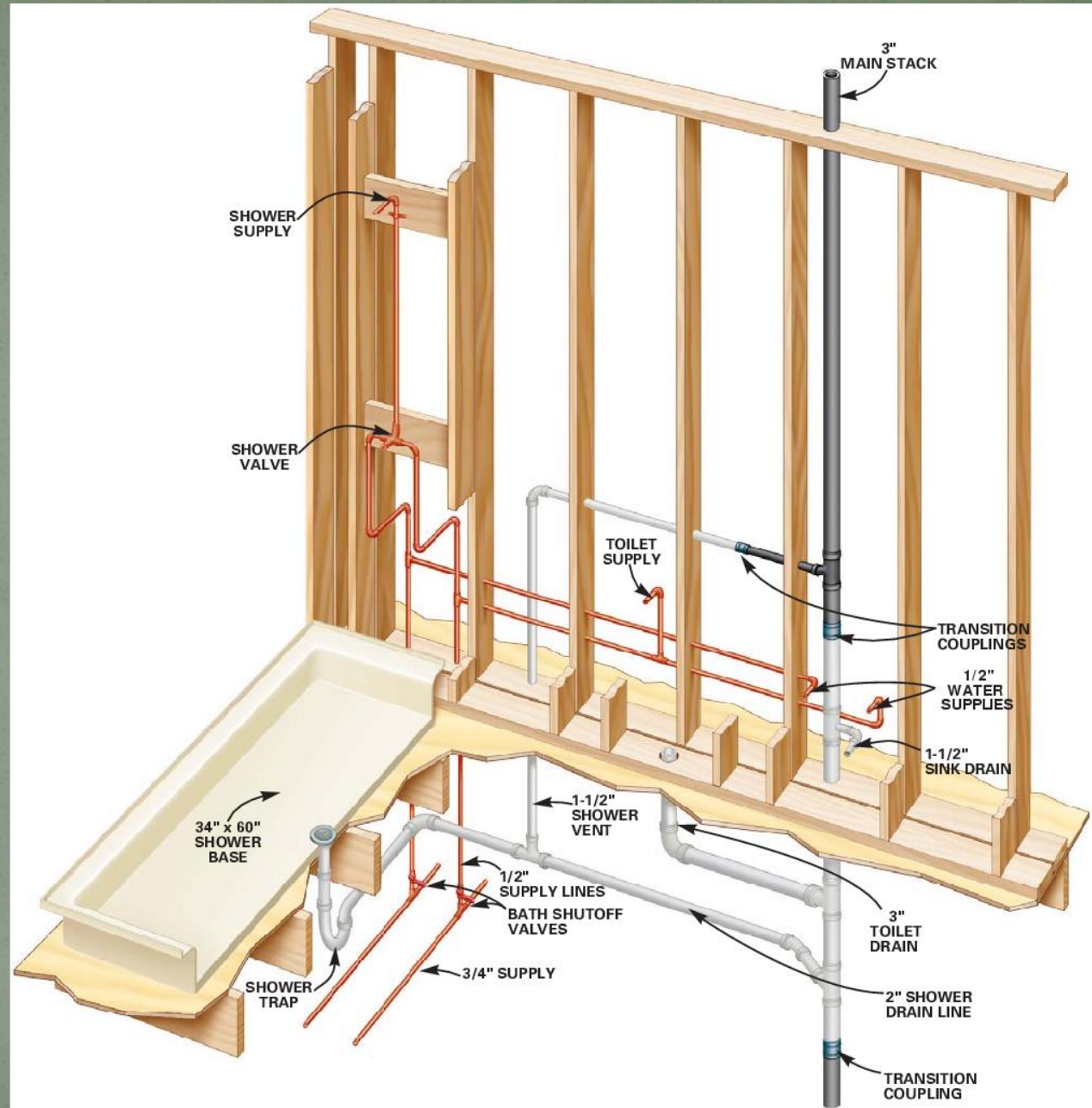
**1 =Not Proficient 2=Approaches Proficiency**

**3=Proficient**

1. First Aid supplies and fire suppressants are available and checked before the operation is begun.
2. Closed-toe shoes are worn.
3. No loose clothing or jewelry that could become a safety hazard are worn.
4. Approved personal protective equipment is worn at all times (i.e. gloves, goggles, and apron.)
5. Proper use and safe distribution of materials is maintained.
6. Proper, safe use of tools and equipment are used at all times.
7. Safe operating procedures are maintained throughout the operation.



A complete rough plumbing assembly with rough-in Water Distribution System and rough-in Drain Waste & Vent System in a framing structure.



<http://www.kimberlin.com/tech-content/rough-plumbing-assembly-in-framing-structure.pdf>



# 10 QUICK INSTALLATION STEPS

- 1. Measure** pipe from bottom or shoulder of each socket into which pipe is to fit.
- 2. Cut** pipe to required length, making sure cut is square. **FOLLOW SAFETY PROCEDURES TO AVOID CUTTING YOURSELF!**
- 3. Ream** inside and chamfer outside of pipe to eliminate all burrs. Sand lightly.
- 4. Clean** all dirt, moisture, and grease from pipe and fitting socket using a clean, dry cloth.
- 5. Check** dry fit of pipe in fitting socket and make alignment marks before disassembling for cementing.



# Dry Piping Assembly: PVC or ABS

90 Degree Elbows

Make alignment marks for assembly

3" PVC

Drain Tee

PVC



<http://www.pvc.com/pvc5001071005.htm>

ABS



<http://www.absplastic.com/absplasticphoto/000010.htm>



# Cutting ABS and PVC

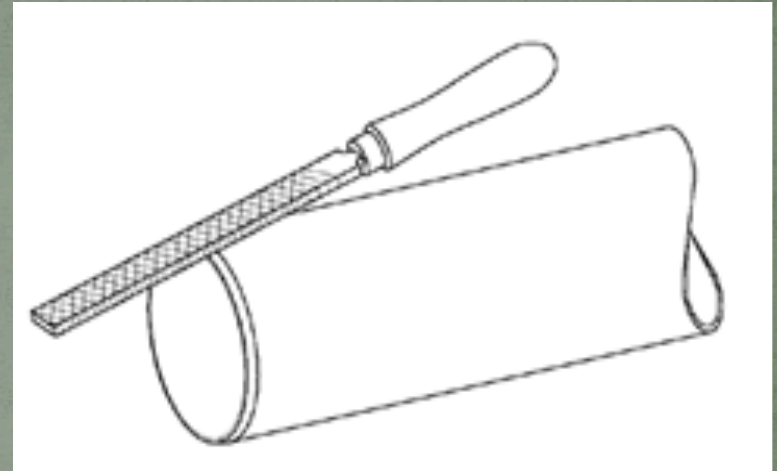




# Ream and Camfer



<http://www.ndaid.com/ASSETS/6813AA986D5B43FEA78AF012737298E6>  
Dehurring Tools 3C.jpg

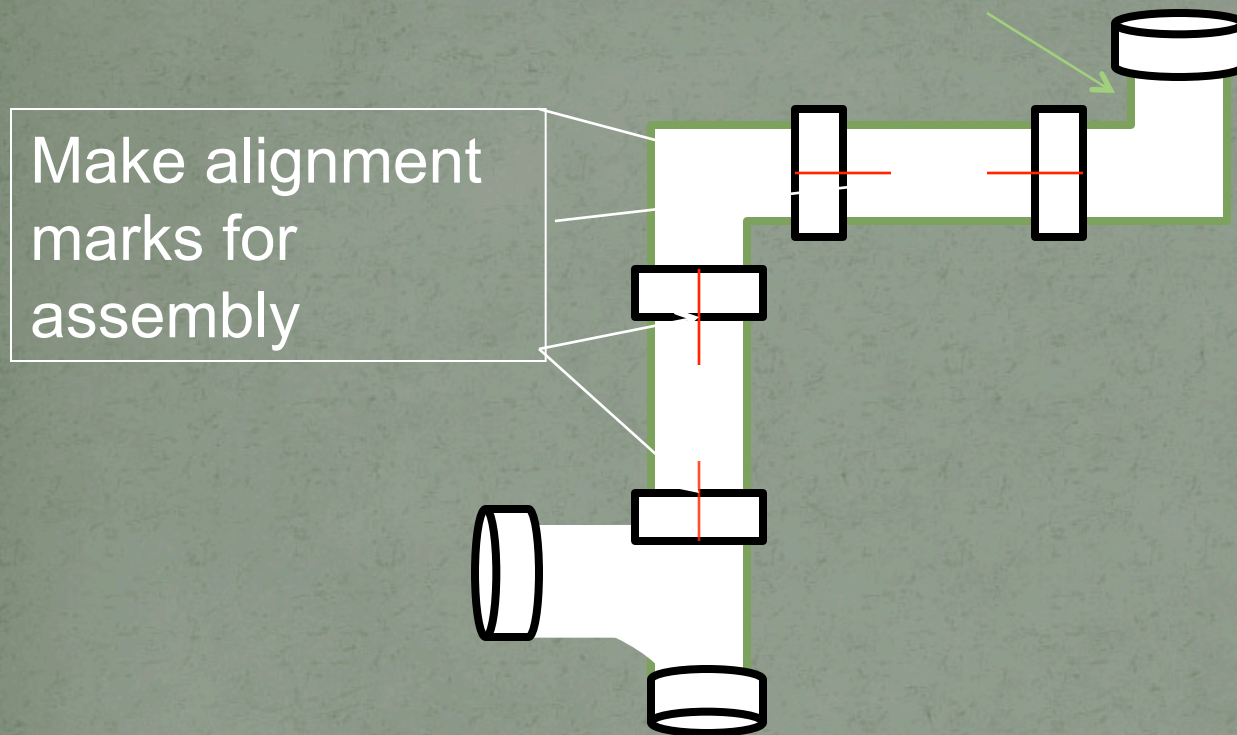


[http://4.bp.blogspot.com/\\_1\\_dKtCsQwmbR5/YuOwhCnIcAAAAAAATcd/s400/000v+knife.jpg](http://4.bp.blogspot.com/_1_dKtCsQwmbR5/YuOwhCnIcAAAAAAATcd/s400/000v+knife.jpg)





# Dry Piping Assembly Completed





## 10 QUICK INSTALLATION STEPS: (Continued)

- 6. Apply** a light coat of solvent cement to the inside of the fitting socket and the outside of the pipe.  
**Caution: use gloves and avoid contact with eyes when using solvent cement!**
- 7. Insert** pipe into fitting socket, giving the pipe a one-quarter turn and making sure it goes all the way to the socket bottom.
- 8. Hold** the joint together until a tight set is attained before proceeding to the next joint.
- 9. Check** cement bead around joint; wipe excess cement from the pipe.
- 10. Don't** move the system until the joints have cured (set) at least as long as recommended by the solvent

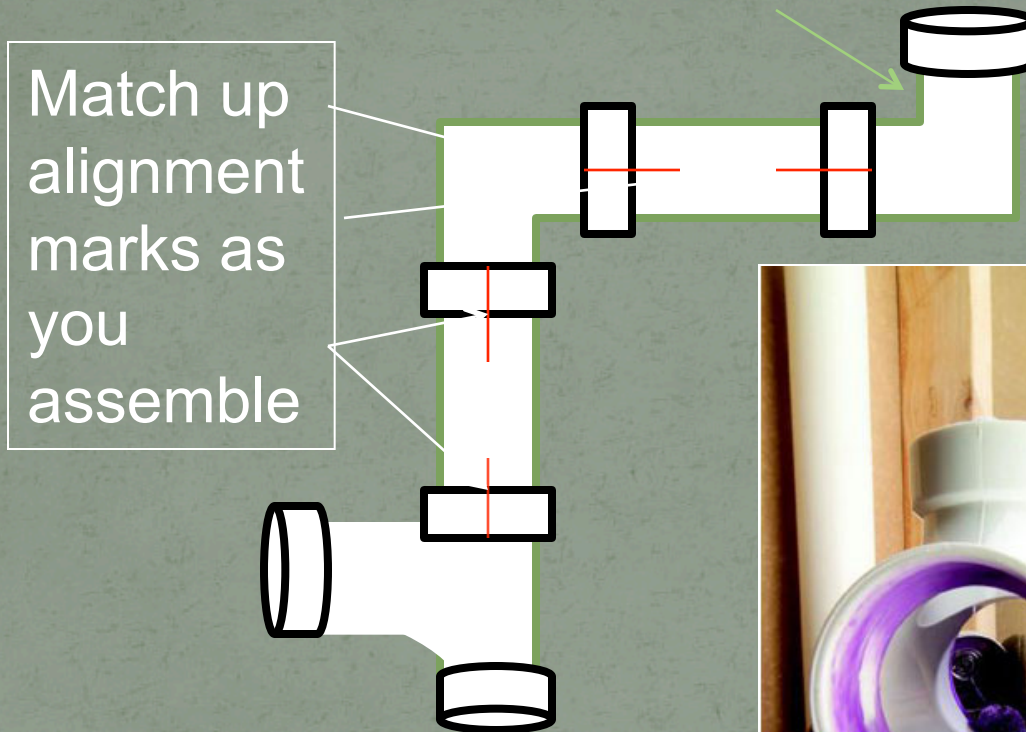


# Liquid Welding





# Assemble with Solvent Cement





# Next Lesson: Water Distribution System (cont.)

- Student will be able to assemble a soil, waste and vent system by:
  1. Demonstrating how to complete a Safety Rubric observation.
  2. Identifying and completing the steps in assembling a DWV System.



# Review Objectives

- Student will be able to prepare to assemble a soil, waste, and vent system by:
  1. Demonstrating how to complete a Safety Rubric observation.
  2. Identifying the steps in assembling a DWV System.