

## Sections 1.4.1 and 1.4.2 – Wrenches

The correct wrench fits the hardware snug, provides enough leverage for the task, and can be manipulated in the space available.



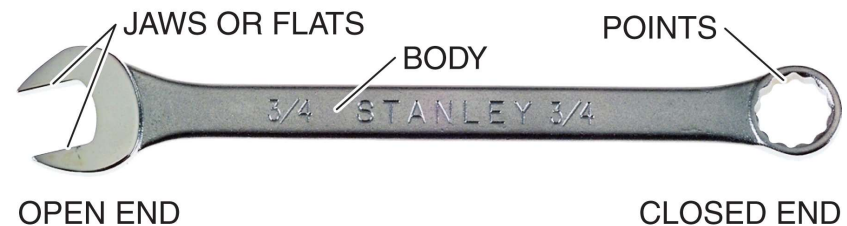
(A) OPEN-END



(B) BOX-END WRENCH



(C) OFFSET RATCHETING BOX WRENCH



(D) COMBINATION

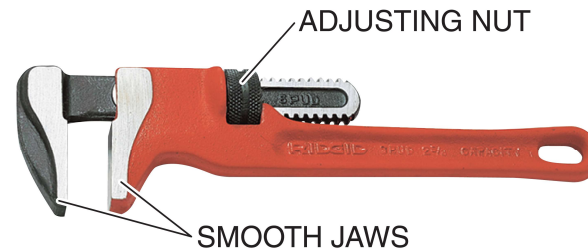
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# Sections 1.4.1 and 1.4.2 – Wrenches

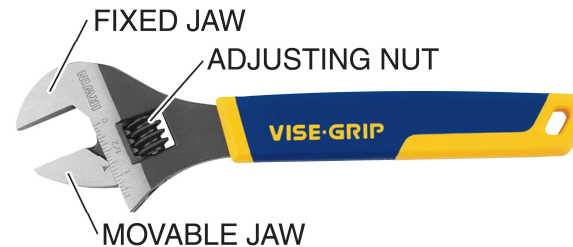
Spud wrenches are very handy if you are often working with large valve caps or plumbing fixtures.



(A) PIPE WRENCH



(B) SPUD WRENCH



(C) ADJUSTABLE WRENCH

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## Sections 1.5.1 and 1.5.2 – Sockets

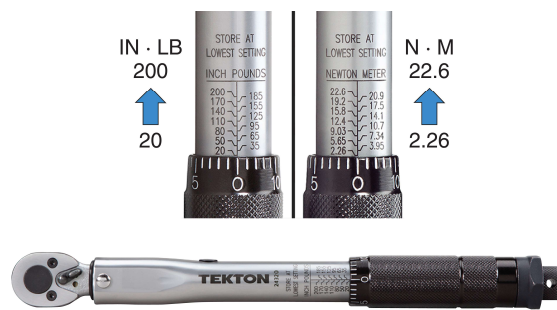
Sockets and ratchet drives are very popular due to their versatility and speed.



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# Sections 1.5.1 and 1.5.2 – Sockets

Torque wrenches allow the user to apply a specific amount of twisting power to the hardware. Some digital models can hold settings and torque events in memory.



(A) CLICK-TYPE



(B) DIGITAL



(C) NO-HUB

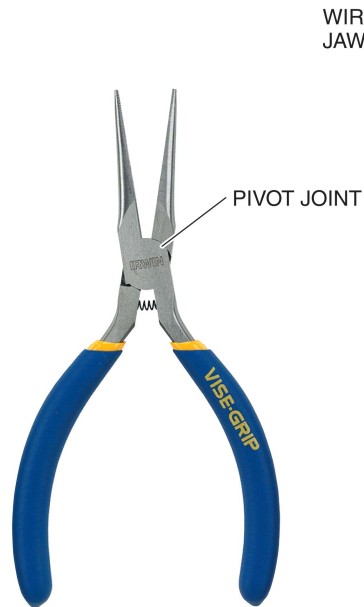
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# Sections 1.6.1 to 1.6.5 – Pliers

Each type of plier and jaw shape is best for specific uses. Locking pliers can free one hand by standing in as a clamp.



(A) SLIP-JOINT



(B) LONG-NOSE



(C) LINEMAN



(D) TONGUE-AND-GROOVE



(E) LOCKING

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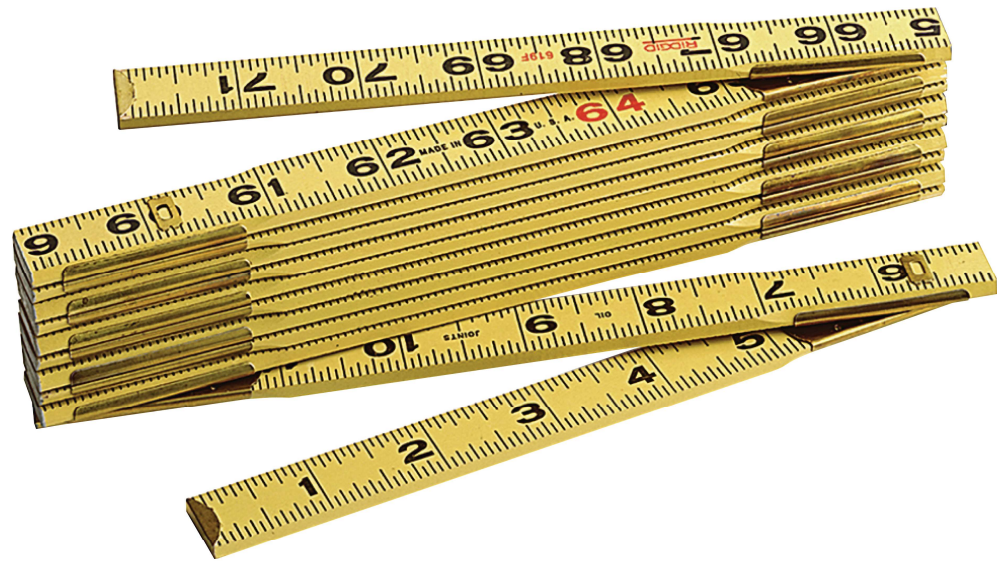


## Sections 2.1.2 and 2.1.3 – Tape Measures

Tape measures, or measuring tapes, are great for measurements for a range of lengths. Folding rules are usually 6 feet or 2 meters long and remain rigid, which has its advantages as well.



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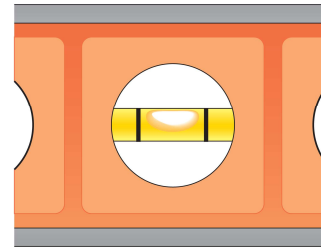


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# Section 2.2.1 – Level Use



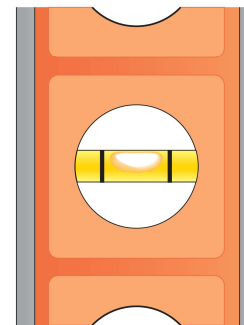
(A)



(B) LEVEL



(C)



(D) PLUMB

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## Section 2.2.5 – Squares

A pipefitter's square looks like a carpenter's square from a distance, but the tables and formulas marked on it are different. They are best for large stock and checking framing.



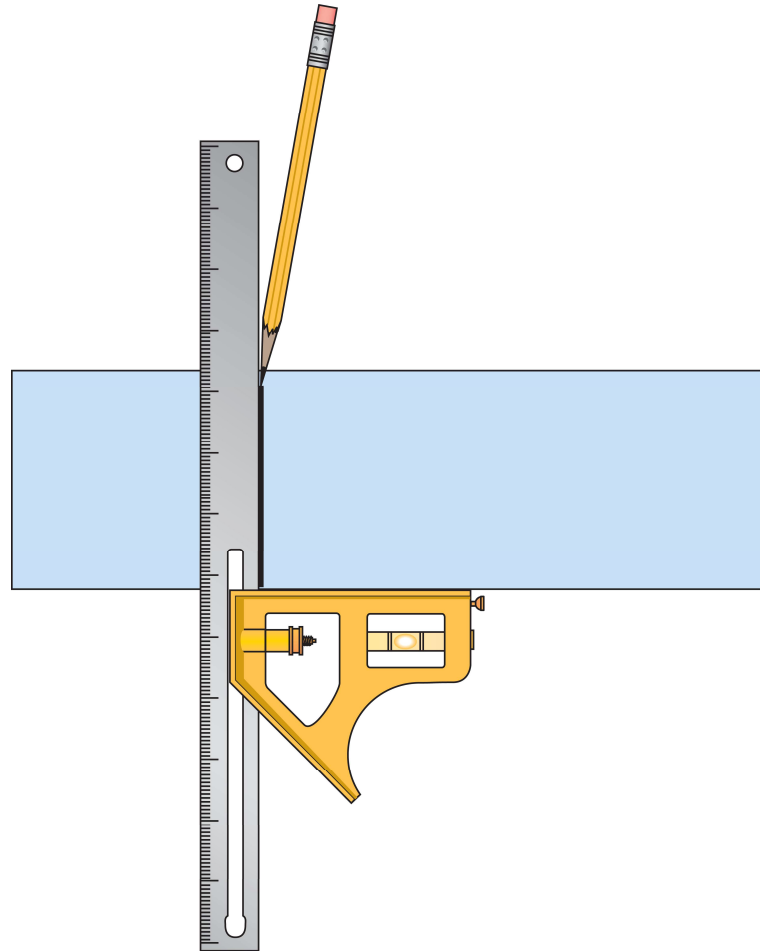
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## Section 2.2.5 – Squares

The combination square can mark 90-degree angles and ...

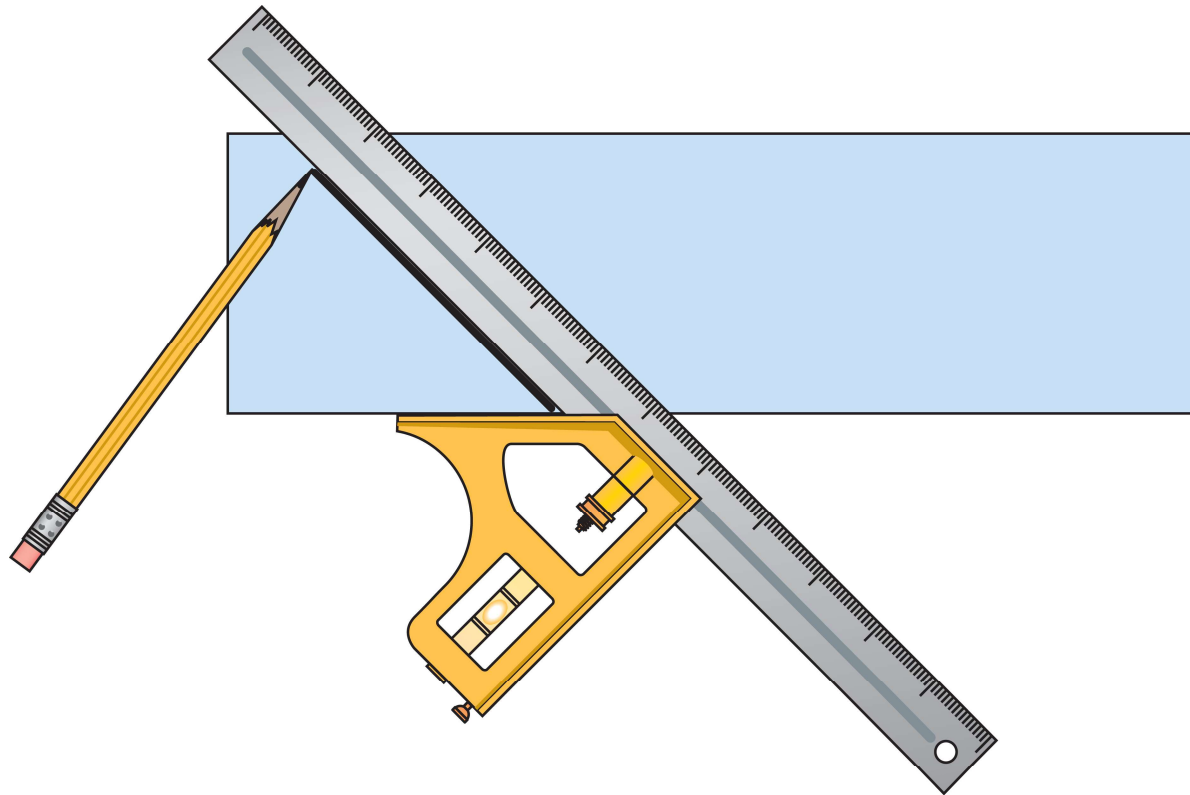


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## Section 2.2.5 – Squares

...45-degree angles. It is limited somewhat by its size and design to scribing lines rather than checking framing for a square condition.

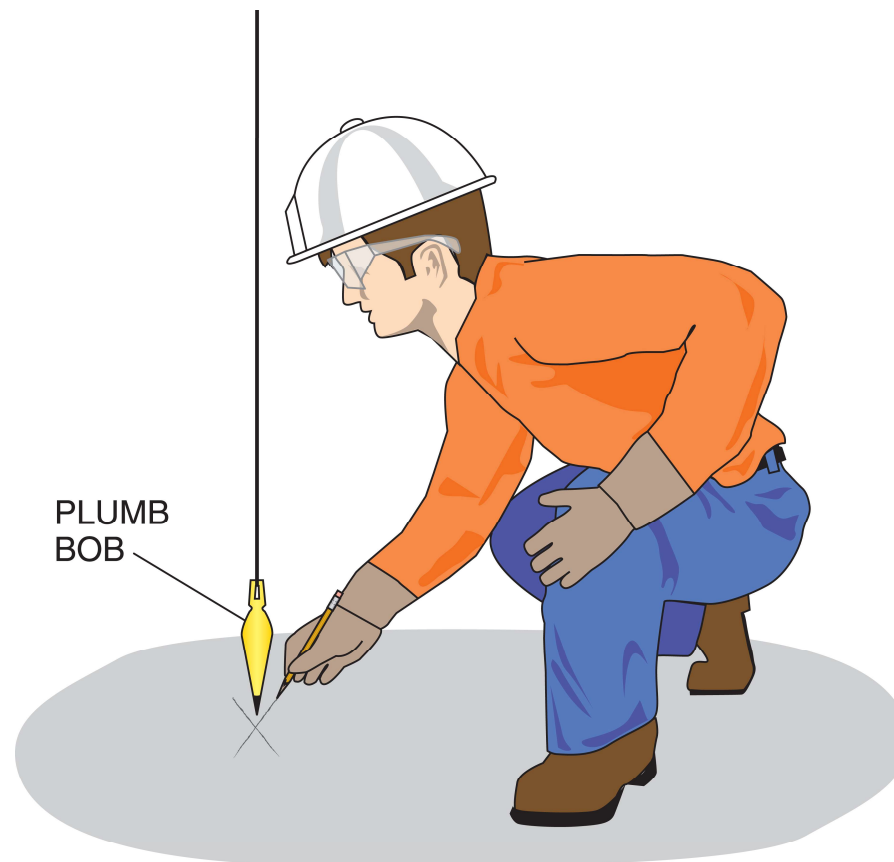


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## Sections 2.2.6 to 2.2.8 – Plumb Bobs and Chalk Lines

Plumb bobs can identify a point directly beneath another point. Once this point is identified,...



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## Sections 2.2.6 to 2.2.8 – Plumb Bobs and Chalk Lines

... a chalk line can be used to place a straight line between points.



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## Next Session...

### **CUTTING and SHAPING TOOLS; OTHER COMMON HAND TOOLS**

Read Sections 3.0.0 through 4.3.1. Complete the Section Reviews for all module sections.

