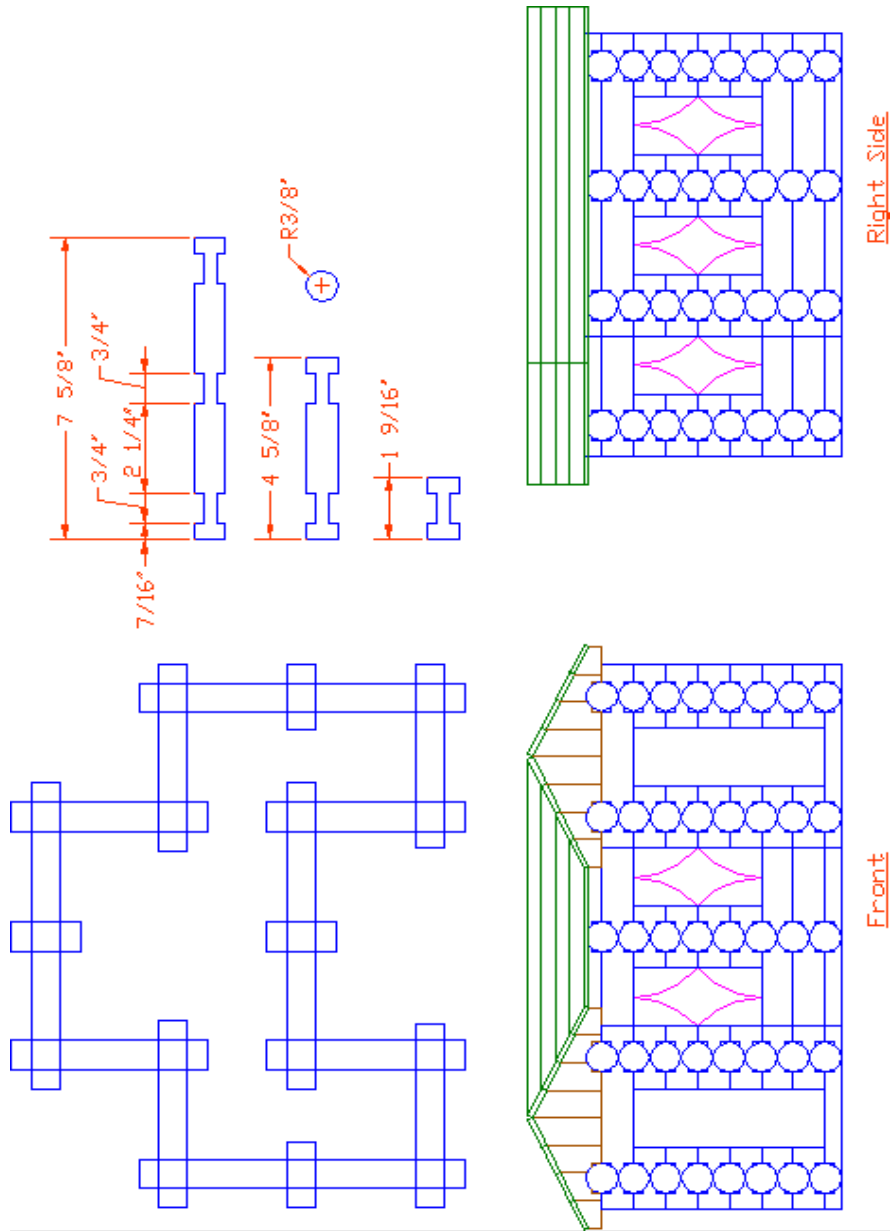


AutoCAD 2011: One Step at a Time
Lesson 10: Geometric Constraints & Alternate Selection Methods

11R10	Exercises
--------------	------------------

I've modified an earlier project for our first Lesson 10 exercise. This should give you some frame of reference when you compare different modifying commands and methods.

1. Open the *Cabin-adv* file in the C:\Steps\Lesson10 folder.
 - 1.1. Using the objects provided, the grips procedure, and your preferences in the Options dialog box, complete the drawing shown.
 - 1.2. Save the drawing as *MyCabin-adv* in the C:\Steps\Lesson10 folder.



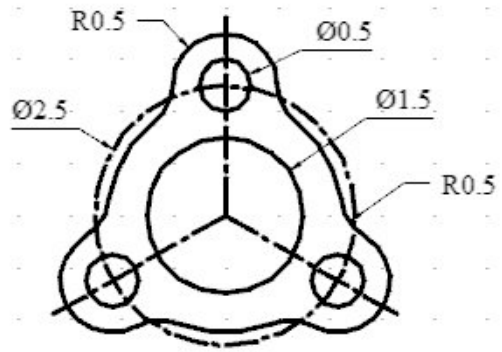
2. Start a new drawing from scratch.

2.1. Use the following setup:

- 2.1.1. Grid: $\frac{1}{2}$
- 2.1.2. Snap and Layers: as needed
- 2.1.3. Font: Times New Roman
- 2.1.4. Dimension styles: as needed

2.2. Create the drawing at right.

2.3. Save the drawing as *MyGasket* in the C:\Steps\Lesson10 folder.

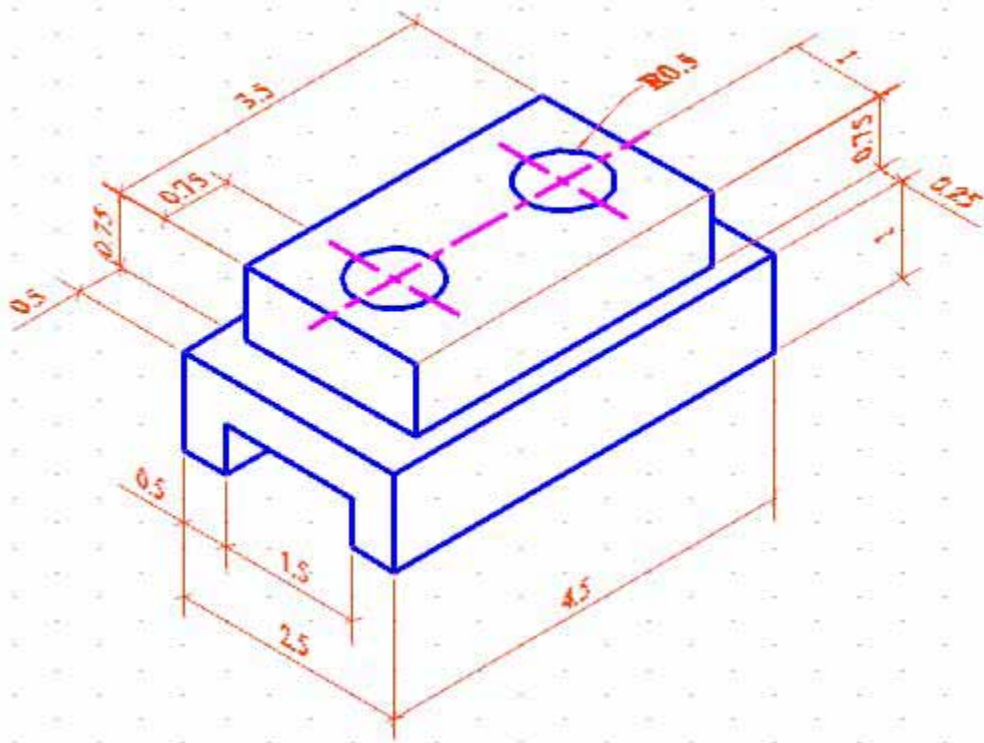


3. Start a new drawing from scratch.

3.1. Use the setup described in Exercise #2.

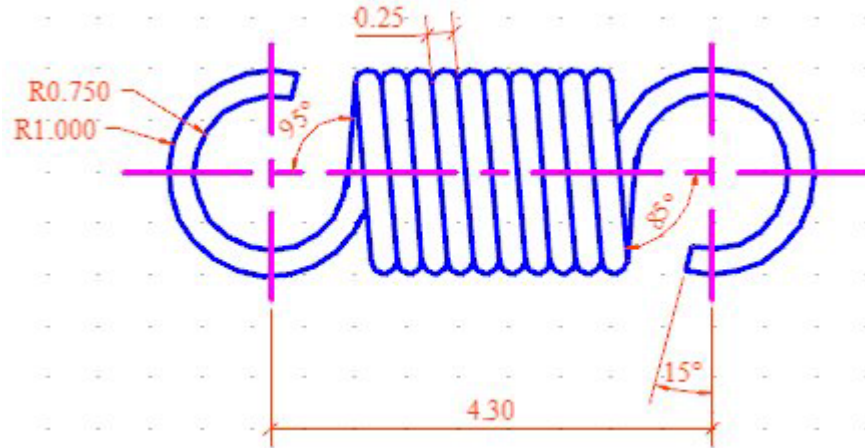
3.2. Save the drawing as *MySlottedGuide* in the C:\Steps\Lesson10 folder.

3.3. Create the drawing.



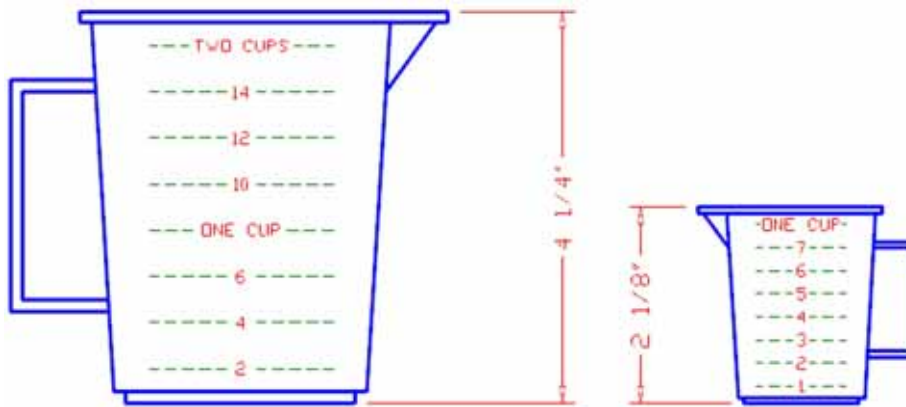
Slotted Guide

4. Start a new drawing from scratch.
 - 4.1. Repeat the setup you did in Exercises 2 and 3.
 - 4.2. Save the drawing as *MySpring* in the C:\Steps\Lesson10 folder.
 - 4.3. Create the spring drawing.



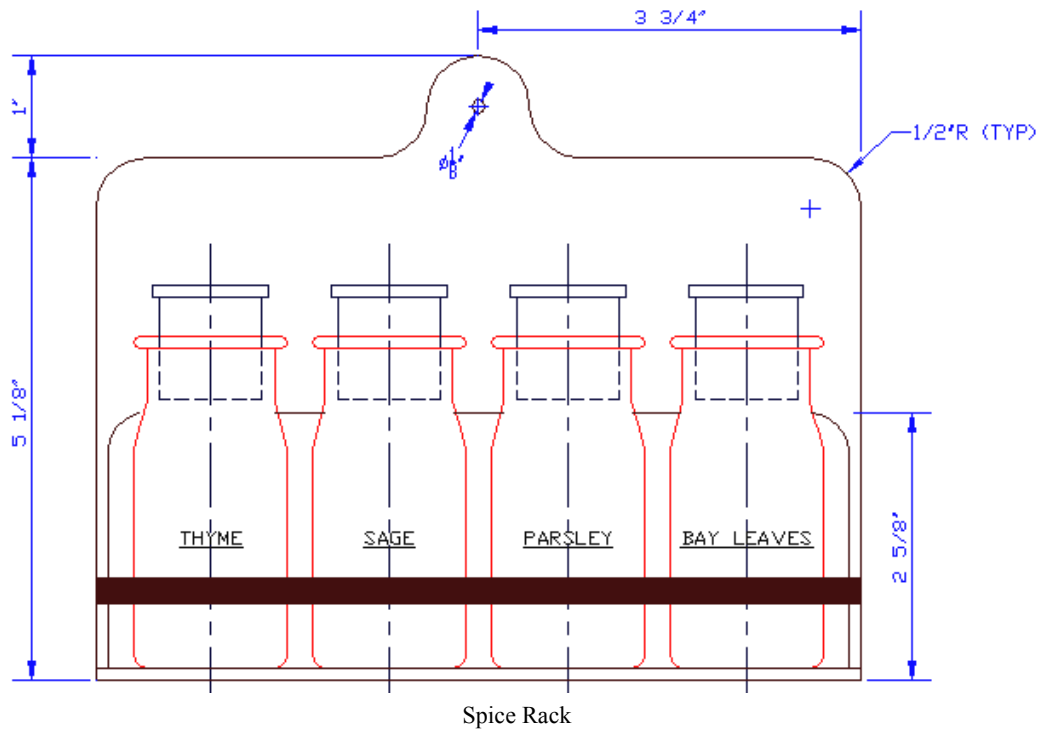
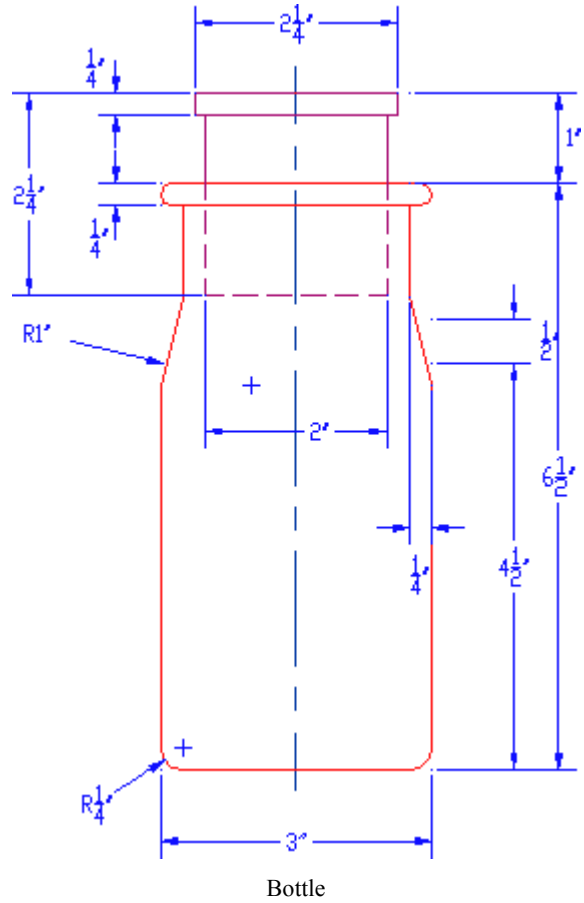
Spring

5. Create and dimension the Measuring Cups. The grid is set to 1/4". Use appropriate layers.



Measuring Cups













6. Using the bottle detail at right, create the drawing of the spice rack (below). The grid is 1/8". Fully dimension the drawing (not the bottles) and use appropriate layers.



11R10**Review Questions**

1. When two endpoints occupy the same location, they are said to be _____.
2. You can create any geometric constraint using the _____ command.

Identify these constraints.

3. 	4. 	5. 
6. 	7. 	8. 
9. 	10. 	11. 
12. 	13. 	14. 

To see all the constraint (bars) in a drawing, pick the (15) button on the (16) panel.

- 15.
- 16.
17. (T or F) You cannot constrain the center of an arc.
18. (T or F) You cannot constrain the center of a line.
19. Use the _____ command to have AutoCAD automatically constrain all selected objects.
20. Normal command procedures – giving a command then selecting the object of the command – can be called (Noun/Verb selection, Verb/Noun selection).
21. Access the Options dialog box by typing _____ at the command prompt.
22. The system variable for Noun/Verb selection is _____.
23. Its default value is _____.
24. If the Use Shift to Add box in the Options dialog box has a check in it, the user must hold down the _____ key to select more than one object.
25. The system variable for Use Shift to Add is _____.
26. Its default value is _____.
27. The system variable for Press and Drag is _____.
28. Its default value is _____.
29. _____ enables us to pick an open area of the drawing to automatically begin a selection window.

30. The system variable for this is _____.
31. Its default value is _____.
32. To change the size of the pickbox from the command line, type _____.
- 33.

Answers

- | | |
|-------------------|-------------------------|
| 1. Coincident | 17. F |
| 2. GeomConstraint | 18. T |
| 3. Coincident | 19. AutoConstrain |
| 4. Concentric | 20. Verb/Noun Selection |
| 5. Collinear | 21. Options (or op) |
| 6. Equal | 22. Pickfirst |
| 7. Fixed | 23. 1 |
| 8. Horizontal | 24. SHIFT |
| 9. Vertical | 25. Pickadd |
| 10. Parallel | 26. 1 |
| 11. Perpendicular | 27. Pickdrag |
| 12. Symmetrical | 28. 0 |
| 13. Smooth | 29. Implied Windowing |
| 14. Tangent | 30. Pickauto |
| 15. Show all | 31. 1 |
| 16. Geometric | 32. Pickbox |