

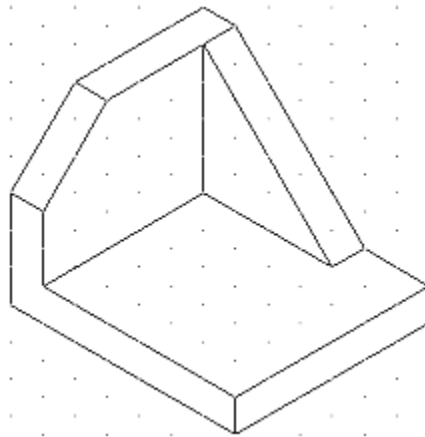
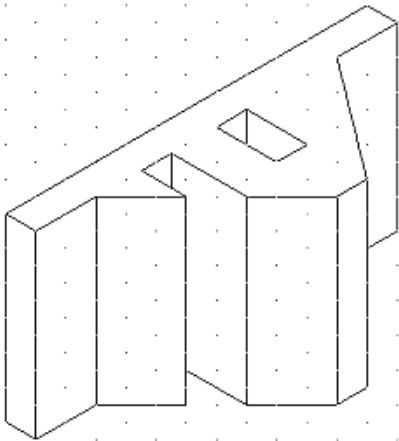
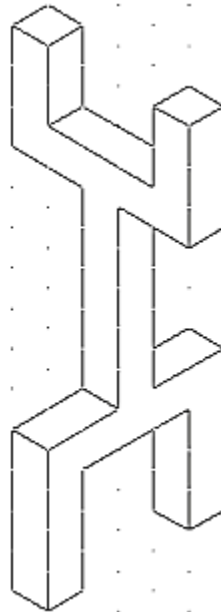
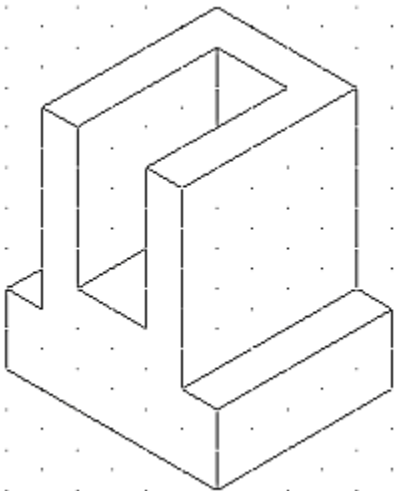
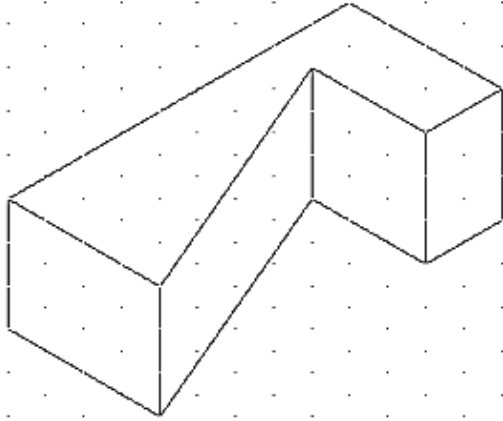
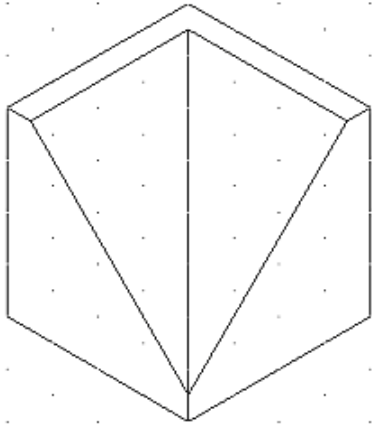
# **AutoCAD 2010: One Step at a Time**

## ***Lesson 3: Drawing Aids***

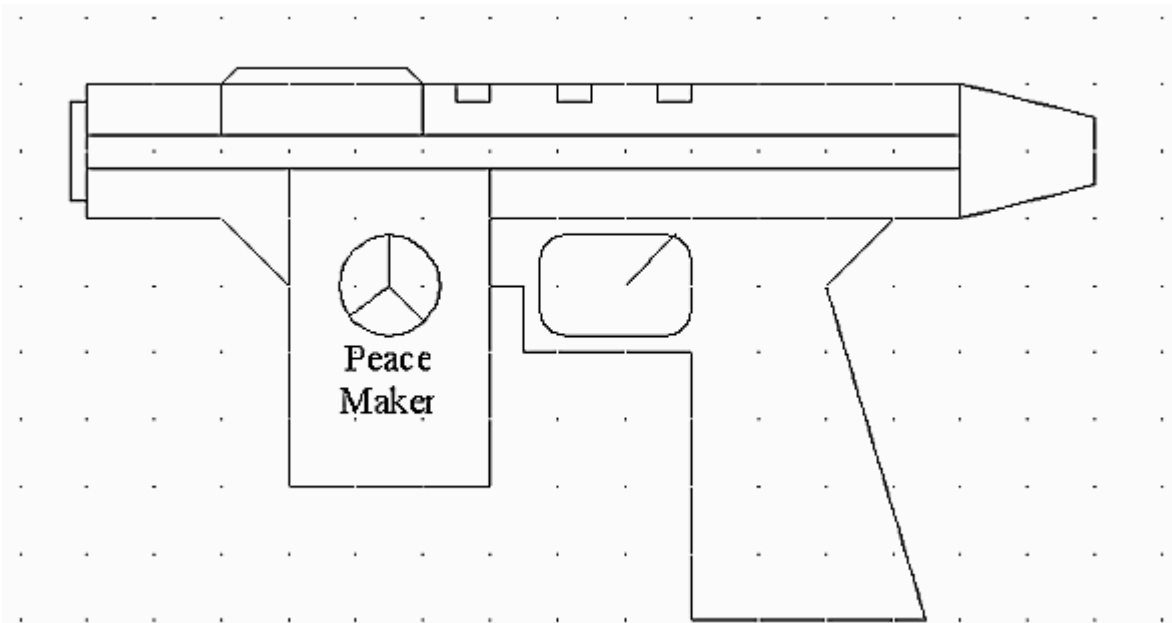
**10R3**

### **Exercises**

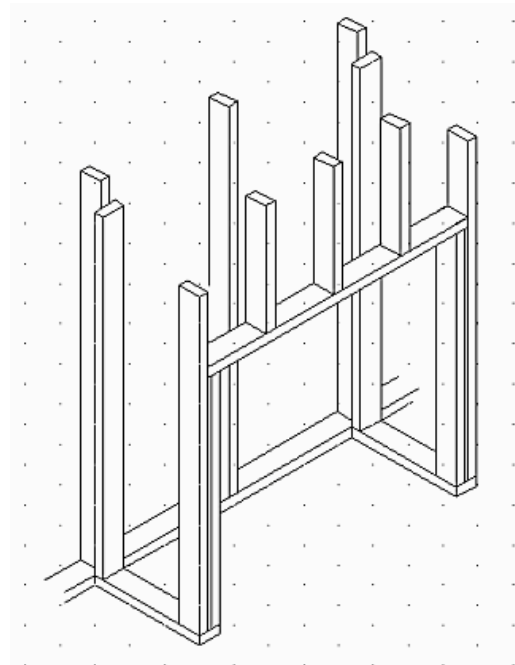
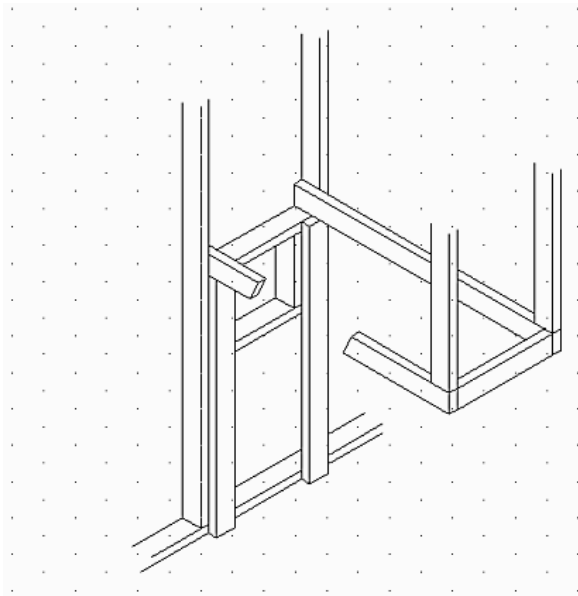
1. Start a new drawing. Set it up as follows:
  - 1.1. Units: architectural
  - 1.2. Lower left limits: 0,0
  - 1.3. Upper right limits: 17,11
  - 1.4. Grid: 1
  - 1.5. Snap:  $\frac{1}{2}$
  - 1.6. Save this as a template file called *MyGrid1.dwt* to the C:\Steps\Lesson03 folder.
  
2. Start a new drawing. Set it up as follows:
  - 2.1. Units: decimal
  - 2.2. Lower left limits: 0,0
  - 2.3. Upper right limits: 11,8.5
  - 2.4. Grid:  $\frac{1}{2}$
  - 2.5. Snap:  $\frac{1}{4}$
  - 2.6. Snap style: isometric.
  - 2.7. Save this as a template file called *MyIsoGrid1.dwt* to the C:\Steps\Lesson03 folder.
  
3. Start a new drawing. Set it up as follows:
  - 3.1. Units: architectural
  - 3.2. Lower left limits: 0,0
  - 3.3. Upper right limits: 17,11
  - 3.4. Grid:  $\frac{1}{2}$
  - 3.5. Snap:  $\frac{1}{4}$
  - 3.6. Snap style: isometric
  - 3.7. Save this as a template file called *MyIsoGrid2.dwt* to the C:\Steps\Lesson03 folder.
  
4. For each of the drawings in the following figures, start a new drawing using the *MyIsoGrid2* template file created in Exercise 3. (If this file is not available, use the *IsoGrid2* template in the same folder.) Draw the figures and save them with a convenient name/number in the C:\Steps\Lesson03 folder.



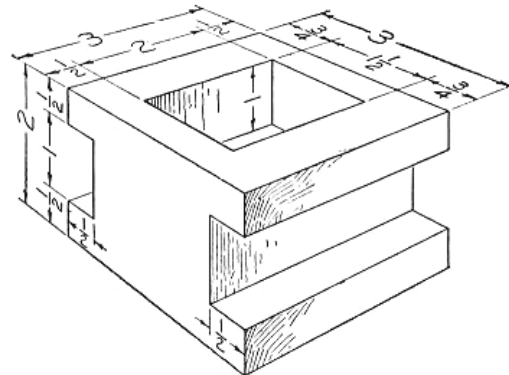
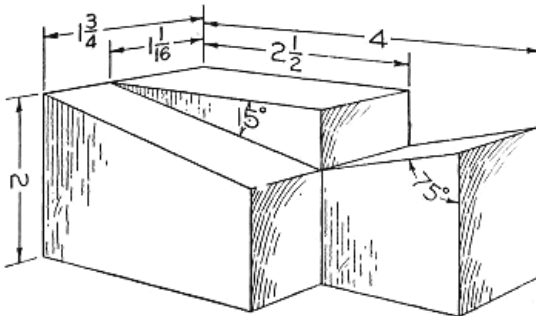
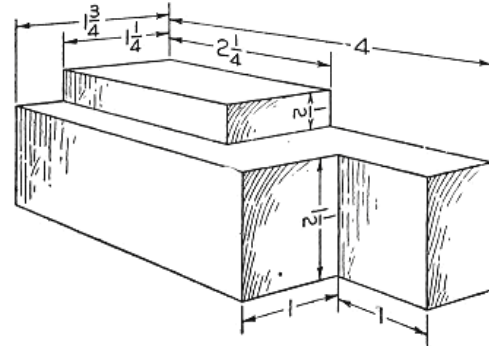
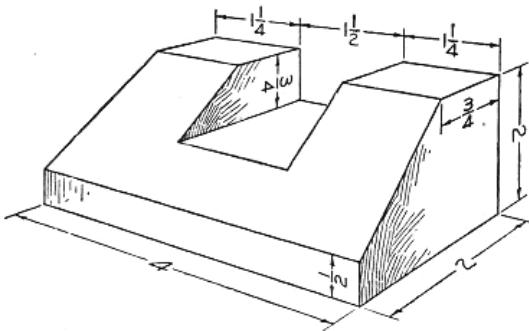
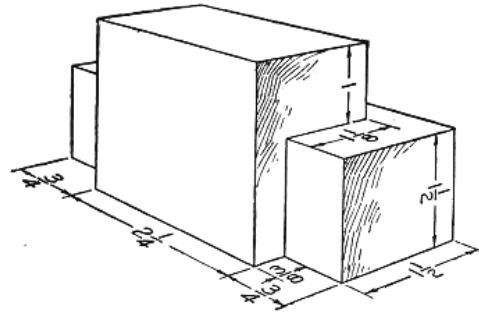
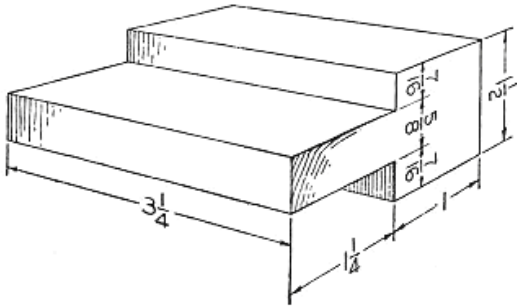
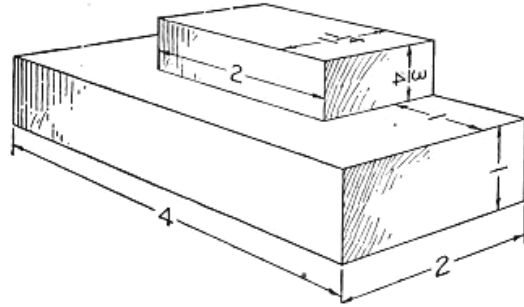
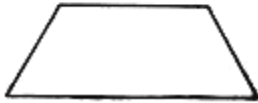
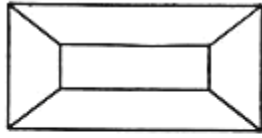
5. Open the *raygun* drawing in the C:\Steps\Lesson03 folder. Using what you learned about OSNAPS, complete the ray gun in the following figure.

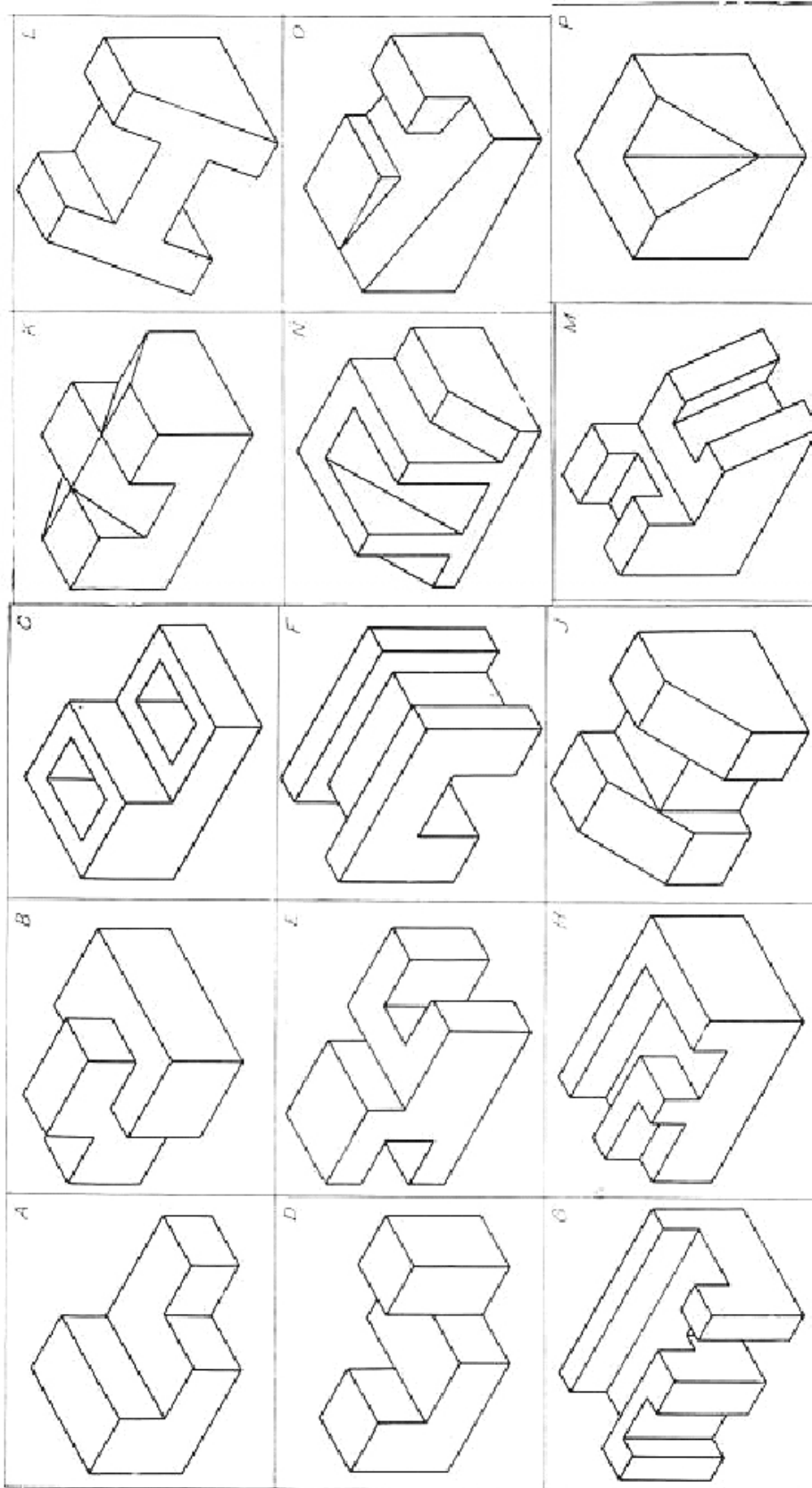


6. Create the fireplace framing shown below. Use 2 x 4 framing and set your drawing limits to 8',8'.



7. See what you can do with the remaining drawings. Don't try the dimensions yet; we'll go over them later.





Please write your answers on a separate sheet of paper.

1. To see a different X and Y grid spacing, use the \_\_\_\_\_ option of the Grid command.
2. The \_\_\_\_\_ tool pulls the crosshairs to a grid point or a location between grid points.
3. Conventional wisdom suggests that grid snap increments should be \_\_\_\_\_ that of the grid increments.

To setup an isometric grid, go to the (4) option of the (5) command.

4.

5.

7. The \_\_\_\_\_ tool restricts drawing to the current XY planes.

Identify these function keys:



8.



9.



10.



11.



12.

13. Verify that these tools are on or off by checking the appropriate toggle on the \_\_\_\_\_ bar.

The standard isometric is drawn on which three angles?

14.

15.

16.

Name two ways to toggle between isometric planes.

17.


















18.

19. To call the Drafting Settings dialog box, type \_\_\_\_\_ at the command prompt.

20. Once you have learned grid, snap, Ortho, and OSNAPS, what must you *never* do?

21. \_\_\_\_\_ provide the means for precisely selecting an endpoint, midpoint, or intersection.

Identify:

| OSNAP TOOLBAR   | SYMBOL | CURSOR MENU | TEMPORARY OVERRIDE (SHIFT +) |
|---|--------|-------------|------------------------------|
|    |        | 35          |                              |
|    |        | 36          |                              |
|    | 22     | 37          | 52 or 53                     |
|    | 23     | 38          | 54 or 55                     |
|    | 24     | 39          |                              |
|    | 25     | 40          |                              |
|    | 26     | 41          |                              |
|    | 27     | 42          | 56 or 57                     |
|    | 28     | 43          |                              |
|    | 29     | 44          |                              |
|    | 30     | 45          |                              |
|    | 31     | 46          |                              |
|    | 32     | 47          |                              |
|    | 33     | 48          |                              |
|    | 34     | 49          |                              |
|  |        | 50          |                              |
|  |        | 51          |                              |

58. To call up the OSNAP screen menu, right click on the screen while holding down the \_\_\_\_\_ key.

59. When both the center and quadrant Running OSNAPS are on, AutoCAD may not select the one you want. To toggle between them, place the crosshairs over the circle or arc and hit the \_\_\_\_\_ key on the keyboard.

60. (T or F) AutoCAD's Ortho tool restricts the Line command to creation of horizontal or vertical lines only.

61. Ortho in isometric mode:

- will be on the 45° and 135° planes
- will be on the 30°, 90°, and 150° planes
- will be on the 0°, 45°, and 90° planes.

62. (T or F) The Grid command is only necessary in developing text size.

63. Drawing speed can be increased significantly by:

- a. controlling the size of the grid
  - b. creative use of the Snap tool
  - c. through Aspect, setting a separate grid spacing for X and Y
  - d. all of the above
64. (T or F) Polar tracking works only on the four quadrants 0 degrees, 90 degrees, 180 degrees, and 270 degrees.
65. (T or F) It is much easier to locate the next point accurately and quickly with Polar Tracking.
66. (T or F) The keyboard is a good tool to use with Polar Snap.
67. (T or F) Drafting can be faster by controlling the snap by grid or polar tracking.
68. (T or F) When the Grid Snap is active, AutoCAD will snap to points related to the grid.
69. (T or F) The Style option of the Snap command deals with text fonts.
70. (T or F) OSNAPs are one way to insure that lines are joined accurately, circles and arcs accurately placed, and a location is precisely found.
71. A flyout tool bar button is:
- a. a button lost on an outfielders uniform during a ball game
  - b. a button that calls the Flyout command
  - c. a button indicated by a small triangle at the bottom right of a command
72. (T or F) Three ways to use OSNAPs include a cursor menu, a toolbar, and the keyboard.
73. (T or F) An isometric is a 2D representation of a 3D object.
74. (T or F) Grid and snap are of little use when drawing an isometric.
75. The isometric plane toggle will help draw along the
- a. 30 degree/90 degree plane
  - b. 150 degree/90 degree plane
  - c. 30 degree/150 degree plane
  - d. all of the above
76. By default, dynamic input uses the \_\_\_\_\_ coordinate system.
77. Use the \_\_\_\_\_ key on your keyboard to access the dynamic input display menu.
78. \_\_\_\_\_ enable you to take the X or Y coordinate from an existing object for use on a new object.
79. I would type \_\_\_\_\_ at the command prompt to redraw or refresh AutoCAD's screen.
80. I would type \_\_\_\_\_ to regenerate an AutoCAD drawing.

## Answers

- |                               |                                    |   |
|-------------------------------|------------------------------------|---|
| 1. Aspect                     | 17. CNTL+E                         | 68. T   |
| 2. Snap                       | 18. F5                             | 69. F   |
| 3. Half                       | 19. DSettings (or ds)              | 70. T   |
| 4. Style                      | 20. Eyeball                        | 71. c   |
| 5. Snap                       | 21. OSNAPS                         | 72. T   |
| 7. Ortho                      | 22. – 57. [See Sect. 3.3,<br>p.59] | 73. T   |
| 8. Grid Toggle                | 58. SHIFT                          | 74. F   |
| 9. Ortho Toggle               | 59. TAB                            | 75. d   |
| 10. Snap Toggle               | 60. T                              | 76. Polar                                       |
| 11. Polar Tracking<br>Toggle  | 61. b                              | 77. Down arrow                                  |
| 12. Object Tracking<br>Toggle | 62. F                              | 78. Point Filters or<br>Object Snap<br>Tracking |
| 13. Status                    | 63. d                              | 79. R   |
| 14. 30°                       | 64. F                              | 80. Regen (or Re)                               |
| 15. 90°                       | 65. T                              |   |
| 16. 150°                      | 66. F                              |   |
|                               | 67. T                              |   |