Questions for Lesson #1C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. What is the purpose of a blueprint?

   _____

   _____

2. Name an older process used to produce a duplicate, but not used as frequently as in the past.

   _____

3. _____ tell the story in a drawing rather than words.

   _____

4. Lines in a drawing should all be the same darkness. The contrast between these lines is controlled by the _____.

   _____

5. Name a type of line used to represent edges not visible to the viewer.

   _____

6. Object lines, hidden lines, center lines, extension lines, and dimension lines are used in combination to produce a _____.

   _____

7. The area of a drawing that shows all necessary information not given on the face of the drawing is the _____.

   _____

8. The thickest line on a drawing is the center line.

   A. True

   B. False

Refer to Drawing 1 in the Appendix and answer the following questions.

9. What type of line is illustrated by letters (E) and (G).

   _____

10. List all letters representing object lines.

    _____

Refer to Drawing 2 in the Appendix and answer the remaining questions.

11. What type of line do (A), (D), (E) and (H) represent?

    _____

12. The number of parts ordered is 24.

    A. True

    B. False

Questions for Lesson #2C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. A drawing must contain three views to show the three principle dimensions.

   A. True

   B. False

2. In the building trade, the front view is called the _____.

   _____

3. What three principal dimensions do all objects have?

   _____

   _____

   _____

4. What is the dimension that is common in the top view and the right side view?

   _____

5. All of the necessary information and instructions can also be shown by two or three views for sprinkler work.

   A. True

   B. False

6. What two dimensions are shown in the top view?

   _____

   _____

7. By looking at the right side of an object and tracing an outline of it, we obtain a _____ view.

   _____

Refer to Drawing 3 in the Appendix and answer the following questions.

8. What kind of lines are (J) and (K)?

   _____

   _____

9. What line in the front view does surface (G) in the right side view represent?

   _____

10. What view(s) show the height of the bracket?

    _____

    _____

SPF04 Answer Sheet #2C Name:_____ WCC ID: @00_____

Questions for Lesson #2C

11. Is surface (M) in the three-dimension drawing visible in the multi-view drawing?

    _____

12. What is the name given to the view of a building if looking straight down on it?

    _____

13. In addition to the views shown, would a left side view be of any value? Why?

    _____

    _____

14. Name the views which show the depth of the support bracket.

    _____

    _____

15. The surface represented by the letter (B) and the surface represented by the letter (F) are at the same height.

    A. True

    B. False

Questions for Lesson #3C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Most objects shown within a drawing require _____ views.

   _____

2. Name two objects that would require only two views.

   _____ _____

3. A hidden line on a drawing represents what?

   _____

   _____

4. How would the height or thickness of a part in a one-view drawing be indicated?

   _____

Refer to Drawing 4 in the Appendix to answer the following questions.

5. Give the encircled letter that denotes a dimension line.

   _____

6. From what material is the flange made?

   _____

7. What line in the front view represents the surface marked (M) in the top view?

   _____

8. What line in the front view represents surface (H) in the top view?

   _____

9. What is the dimension between surface (K) and surface (J) in the front view?

   _____

10. Give the encircled letter that denotes a center line in the front view.

    _____

11. What kind of lines are (B) and (C)?

    _____

12. Diameters are indicated on this drawing by the use of _____ and _____.

    _____ _____

SPF04 Answer Sheet #3C Name:_____ WCC ID: @00_____

Questions for Lesson #4C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Valves and fittings in piping drawings are located by measurements to their _____.

2. On a piping drawing, how would 40" be indicated?

3. What is the type of dimension that is usually given from a finished surface or the center of holes?

4. What is another name given to dimensions used in producing a part?

5. Give two reasons for placing dimensions on a drawing.

6. Name the two general types of dimensions.

7. What is the name given to the style of dimensions when they can be read from the bottom of a drawing?

8. Bidirectional dimensions are placed on a drawing so as to be read from either the _____ or _____.

9. What type of dimension is used for indicating the measurements of a shape of a part?

Refer to Drawing 6 in the Appendix to answer the following questions.

10. What is the overall length of the part?

11. What is the dimension from the hidden surface indicated by the 1¾" dimension and the right edge of the part?

SPF04 Answer Sheet #4C Name:_____ WCC ID: @00_____

12. What is the center-to-center distance between the two similar holes?

    _____

13. What is the overall depth?

    _____

14. What is the diameter of the material the ⅛" NPT is going through?

    _____

15. What is the overall height?

    _____

Refer to Drawing 7 in the Appendix and answer the remaining questions. The dimensions in the drawing are center-to-center.

16. What is the center-to-center distance between the two check valves on the 2" outlet?

    _____

17. What is the distance between the elbow indicated by the letter "B" and the exhauster on the right?

    _____

18. What is the difference from the center of the tee in the 3" exhaust line to the center of the tripping device as measured along the ¾" pipe?

    _____

19. What is the longest piece of 3" pipe, center-to-center, utilized? Disregard the 3" exhaust line extending off the drawing.

    _____

20. What is the distance along the 2" pipe between the center of fitting (A) and the center of the farthest exhauster 2" outlet?

    _____

Questions for Lesson #5C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. When a scale of ¼" = 1'0" is used, to what length will each of the following actual sizes be drawn on the drawing?

Actual Size	Drawn Size
12'	
8'	
2'	
6'6"	
10'3"	

2. Small objects may be drawn _____ size if the drawing paper is large enough.

_____

3. Name two processes by which a hole can be produced in a part.

_____

_____

4. In dimensioning arcs, or sections of circles, what does the letter "R" stand for?

_____

5. Reducing the size of an object in a drawing to fit the paper is known as making the drawing _____.

_____

6. In what view should the diameter and length of a cylinder be shown?

_____

_____

7. If a single view of a cylindrical object is shown, how do you indicate the diameter on the dimension?

_____

8. Suppose you find it necessary to measure some pipe runs on a drawing that has a scale of ½" = 1'0". How long are the actual runs when the dimensions from the drawing are as follows?

Drawn Size	Actual Size
6"	
10"	
4½"	
7¼"	
12⅛"	

SPF04 Answer Sheet #5C Name:_____ WCC ID: @00_____

9. What is the name of the standard used to dimension holes?

_____

10. When dimensioning an arc or section of a circle, the dimension line should point to or lead from where?

_____

Refer to Drawing 5 in the Appendix to answer the following questions.

11. What is the diameter of the small end of the taper?

_____

12. What is the horizontal dimension of the tapered portion of the roll on the right end?

_____

13. What is the overall width (length) of the pipe roll?

_____

Refer to Drawing 8 in the Appendix to answer the following questions.

14. What is the distance from the bottom edge of the bracket to the top of the arm that contains the two ⅝" holes?

_____

15. How deep will the two holes be counterbored?

_____

Questions for Lesson #6C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Name the three types of symbols used to represent threads on a drawing.

   _____

   _____

   _____

2. What are the two series of the American National Form used on threads?

   _____

   _____

3. How many classes of fits are there?

   _____

4. The pipe size given on a drawing is the outside diameter of the pipe.

   A. True

   B. False

5. Threads are dimensioned or called out on a drawing by a series of _____ and _____.

   _____ _____

6. What two types of threads pertain to the sprinkler fitter?

   _____

7. In threads, what is the included angle between the sides of the threads?

   _____

8. The second letter in a thread callout represents what?

   _____

Refer to Drawing 9 in the Appendix to answer the following questions.

9. The ¾"-16NF is a type of pipe thread.

   A. True

   B. False

10. How deep are the holes to be threaded ⅝"-11NC-2?

    _____

11. How many holes are to be threaded with ¾" threads?

    _____

12. Is the ¾"-16NF-2 left-handed or right-handed?

    _____

SPF04 Answer Sheet #6C Name:_____ WCC ID: @00_____

13. The ¾"-16NF is a type of pipe thread.
    A. True
    B. False

14. How many holes have tapered threads?

    _____

15. What does ⅝"-11NC-2 mean?

    _____

    _____

Questions for Lesson #7C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. What is the basic purpose of a sectional view?

2. The imaginary plane that passes through an object, cutting it, is called the _____.

3. What do the arrowheads on the end of the cutting plane line signify?

4. The parallel slanted lines drawn on an object where it has been cut are called _____ or _____ lines.

5. What is a full section? A half section?

   Full_____

   Half_____

6. When are partial or "broken out" sections used?

7. How is a cutting plane line represented on a drawing?

8. What does the cutting plane represent?

9. When is a half section usually shown?

10. What type of section is represented by a wavy, irregular cutting plane?

SPF04 Answer Sheet #7C Name:_____ WCC ID: @00_____

11. What makes seeing different parts in a section view of an assembled group of component parts easier?

    _____

    _____

12. May hidden lines be omitted in sectional views? Explain.

    _____

    _____

Refer to Drawing 10 in the Appendix to answer the following questions.

13. What type of section is used on the check valve?

    _____

14. What type of section is used on the union?

    _____

15. Would a half section view of the globe valve completely describe it?

    _____

16. Of what material is the union made?

    _____

17. What type of material is the packing nut made of on the globe valve?

    _____

18. Of what material are the following check valve parts made?

Part	**Material**
Body	
Disc	
Cap	

19. The cap and body of the swing check valve are made from different material.

    A. True

    B. False

20. What type of material is the union bonnet ring made of on the globe valve?

    _____

Questions for Lesson #8C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Name three factors necessary in making a good pencil sketch.

2. An engineer, architect, and sprinkler fitter often use a pencil sketch for what purpose?

_____

3. A sketch is thought of as a _____ of a final drawing.

_____

4. A horizontal line is drawn using a forearm motion from _____ to _____.

_____ _____

5. The same methods used in sketching horizontal lines can be applied to sloping lines.

   A. True

   B. False

6. How many steps should be used in sketching a circle?

_____

7. Name a more difficult shape to sketch freehand.

_____

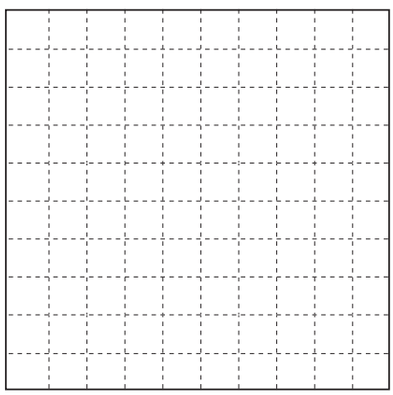
8. Why is a soft pencil desirable in sketching?

_____

_____

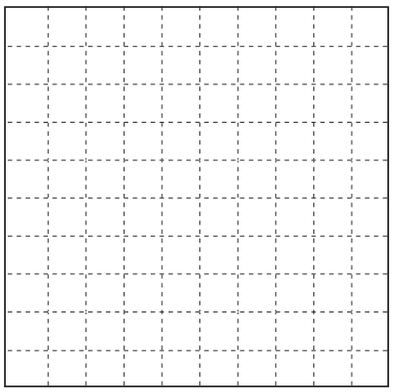
Refer to Drawing 11 in the Appendix to answer the following questions.

9. Sketch the front view of Block "A."

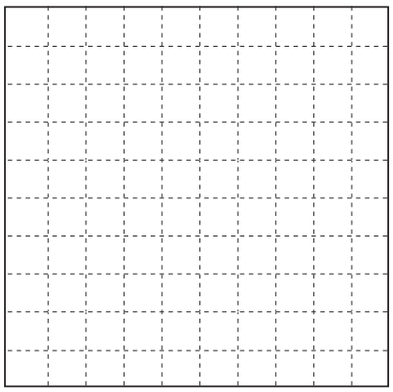


SPF04 Answer Sheet #8C Name:_____ WCC ID: @00_____

10. Sketch the side view of Block "A."



11. Sketch the top view of Block "A."



12. A left side view of "Block A" would show more detail than the right side view.

    A. True

    B. False

13. View "E" is a top view of "Block A."

    A. True

    B. False

14. A top view of the welding coupling would give more detail than the front view.

    A. True

    B. False

15. From which views can the angle of the sloping side be determined?

    _____

    _____

Questions for Lesson #9C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Dimensioning requires the addition of two types of lines to the sketch. Name these lines.

   _____

   _____

2. Your sketch could serve as a _____ of a solution to a problem.

   _____

3. The height is the same in what two views?

   _____

   _____

4. List the four steps to use when preparing a sketch.

   _____

   _____

   _____

   _____

5. What two views in a drawing or sketch have the same depth?

   _____

   _____

6. Why should a beginning sketch be done with light lines?

   _____

   _____

7. In a single view sketch, dimensions are placed where?

   _____

   _____

8. To start sketching, the easiest way is to use the _____ method of layout.

   _____

SPF04 Answer Sheet #9C Name:_____ WCC ID: @00_____

Refer to Drawing 12 in the Appendix to answer the following questions.

9. In the spaces provided below, sketch three views of the pipe support using the method described within the chapter.

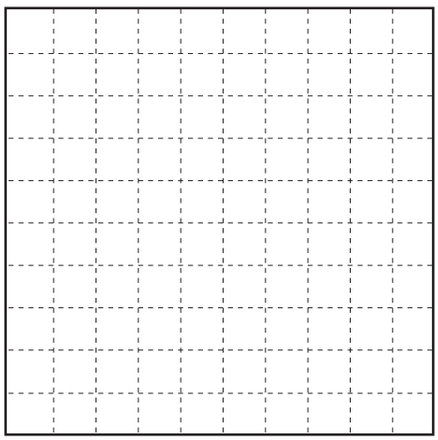
10. Place dimensions on the sketch in their appropriate locations.

11. What is the overall height of the flat iron hanger ring?

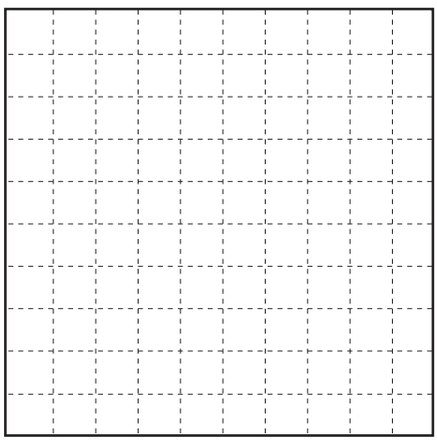
    _____

12. What is the diameter of the hole in the top of the ring?

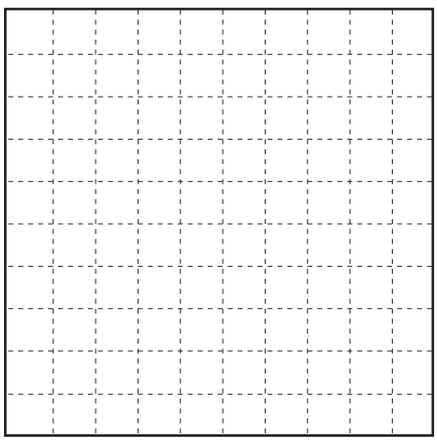
    _____



Top



Front



Right side

Questions for Lesson #10C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. The three principal dimensions appear in their true length in isometrics.

   A. True

   B. False

2. In an isometric drawing, two 30° angled lines and a vertical line make up what is known as the _____.

   _____

3. What is the definition for the word isometric?

   _____

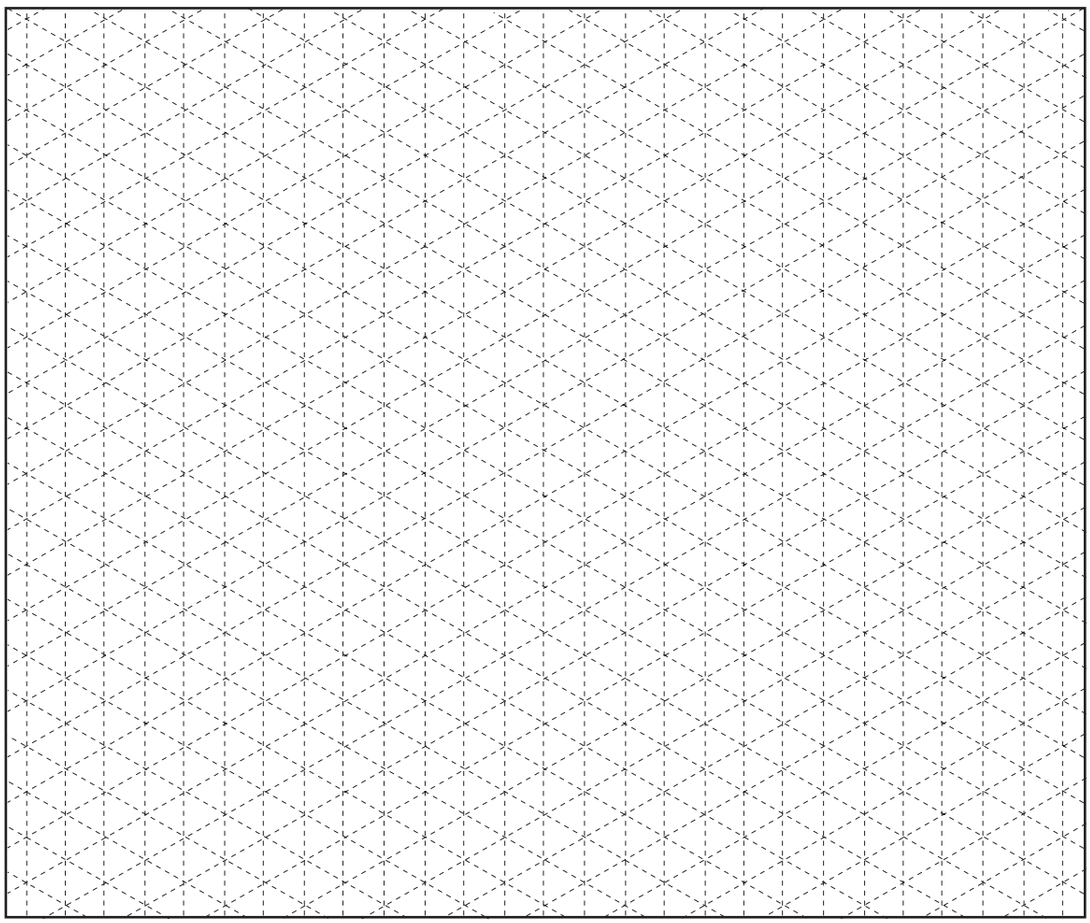
4. The following figures will be found within this study guide. Make a list of the figure numbers and answer yes or no as to whether they are or are not an isometric drawings.

Figures

1.7	
2.1	
2.3	
3.1	
5.1	
5.6	
7.1	

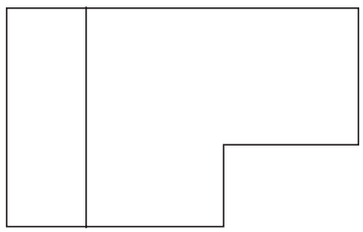
Questions for Lesson #10C

5. Sketch an isometric of a 2" cube. In each visible side, construct a 2" circle.
   Note: Triangle sides are ¼".

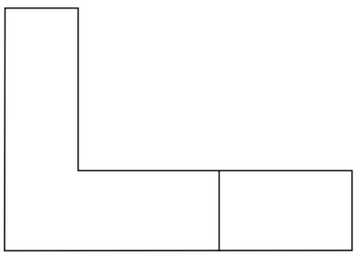


SPF04 Answer Sheet #10C Name:_____ WCC ID: @00_____

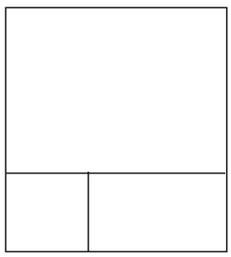
6. Use the the following views of the Locating Block to create an isometric sketch.



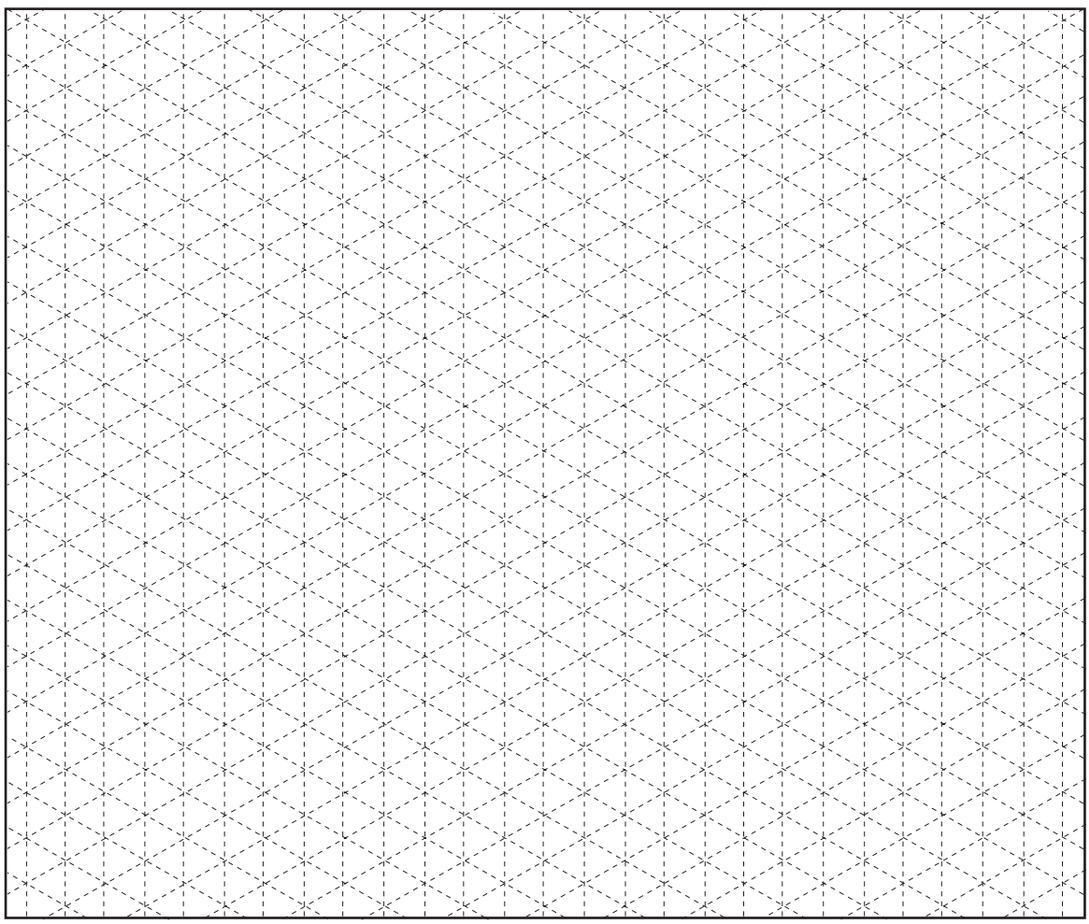
TOP



FRONT



RIGHT SIDE

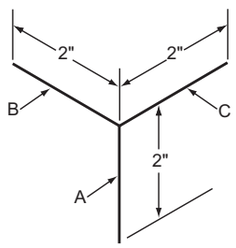


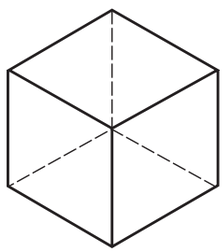
SPF04 Answer Sheet #10C Name:_____ WCC ID: @00_____

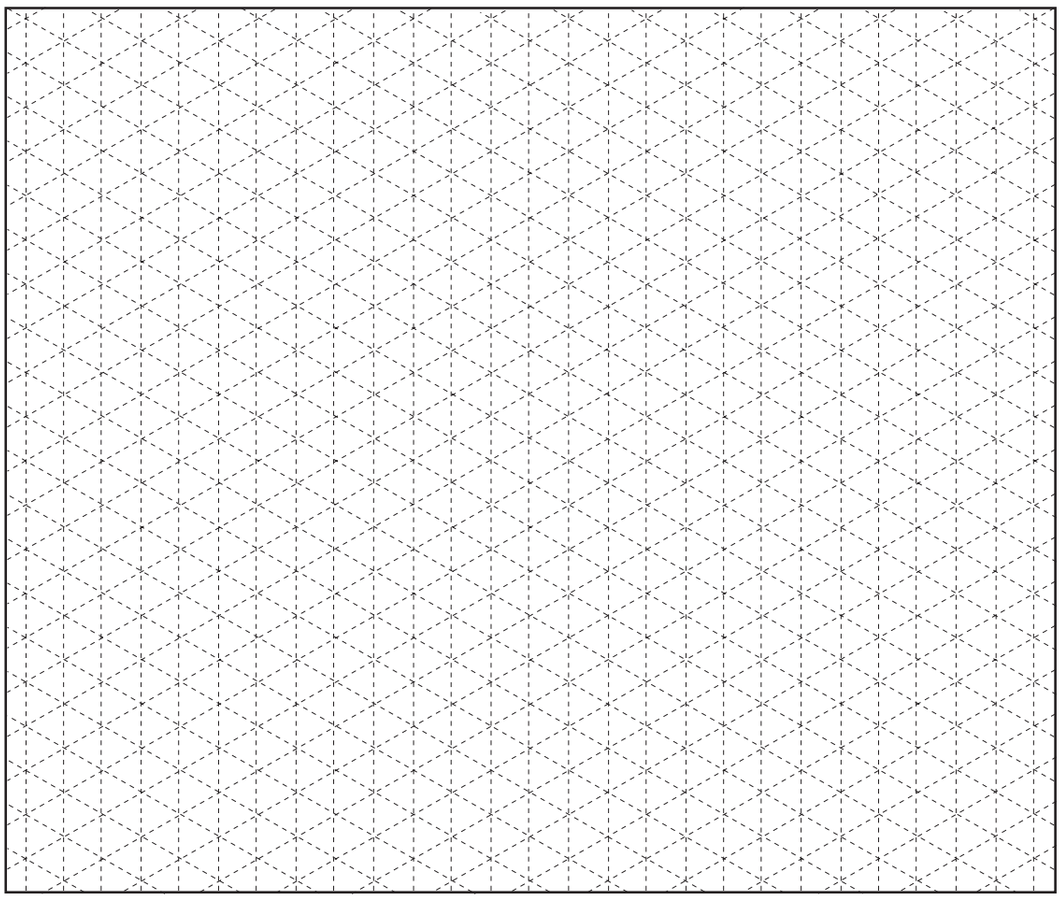
Questions for Lesson #11C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Draw the isometric axes as shown in the first figure at right making each line 2 inches long. Draw the Vertical "A" line first, then the two horizontal lines "B" and "C." Add the lines necessary to complete a cube as indicated in the second figure at right. *Notes: Hidden lines not normally shown on isometric drawings. Triangles are ¼" on each side.*



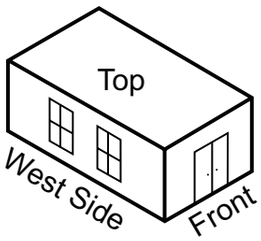




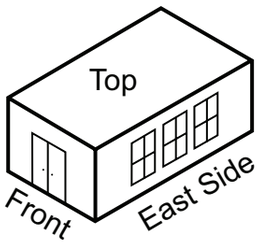
SPF04 Answer Sheet #11C Name:_____ WCC ID: @00_____

Questions for Lesson #11C

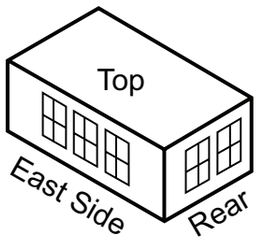
2. The figure below shows four isometric views of a small building. Draw two of the isometric views of the small building which between them show the top and the four sides. Use the dimensions 1 inch wide, ¾ inch high, and 1½ inches long.



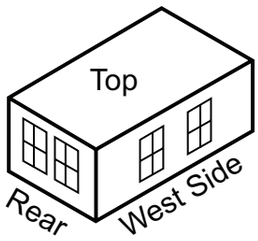
Left Front Profile



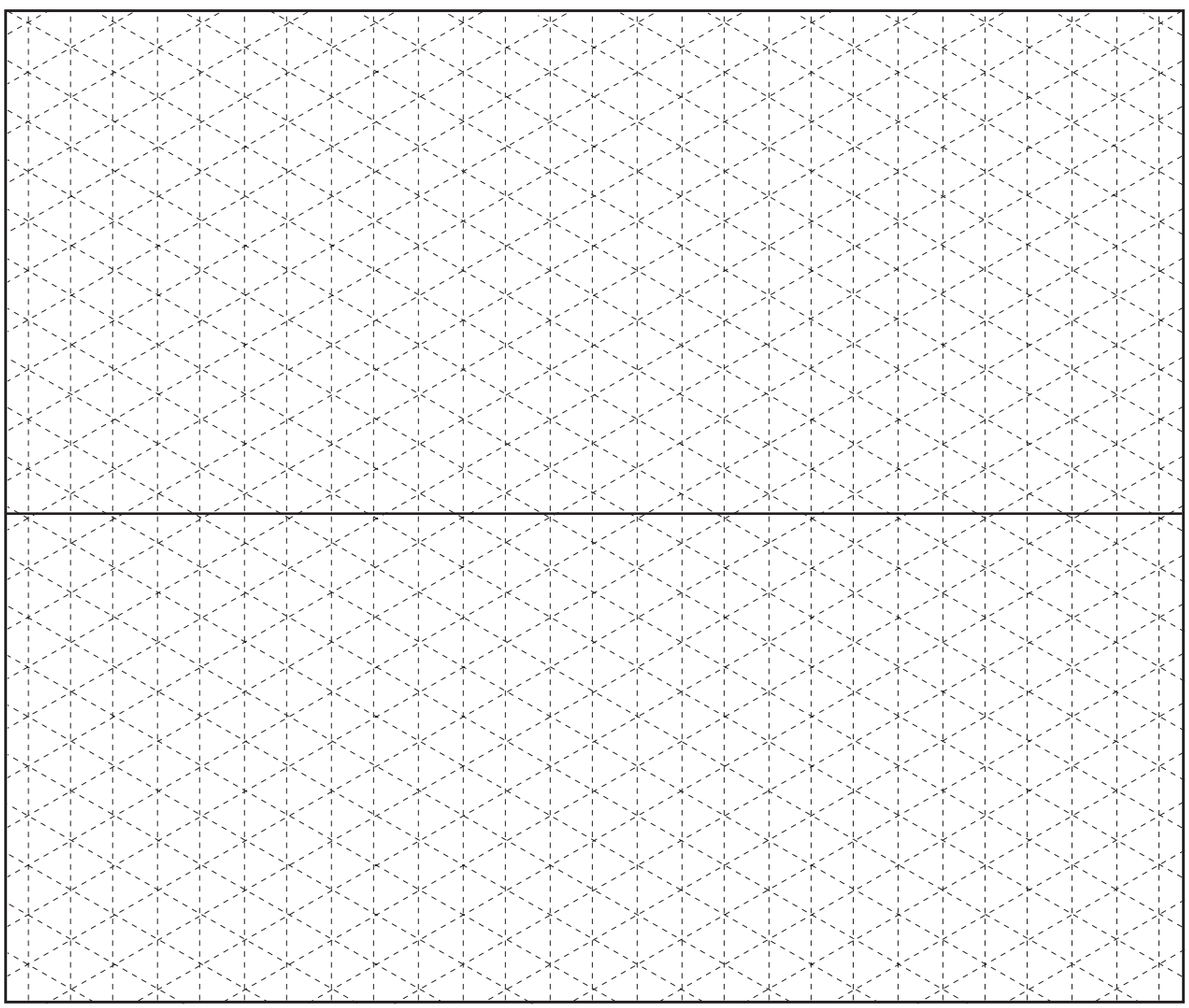
Right Front Profile



Left Rear Profile

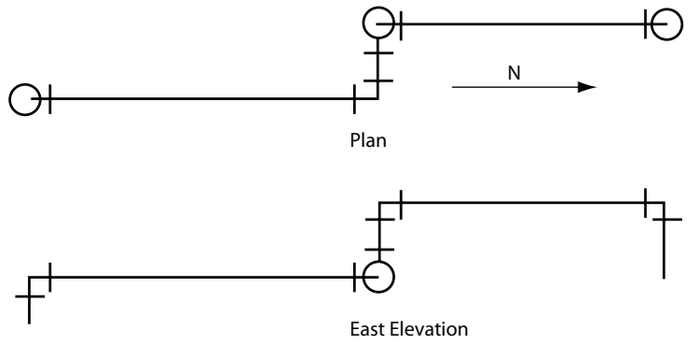


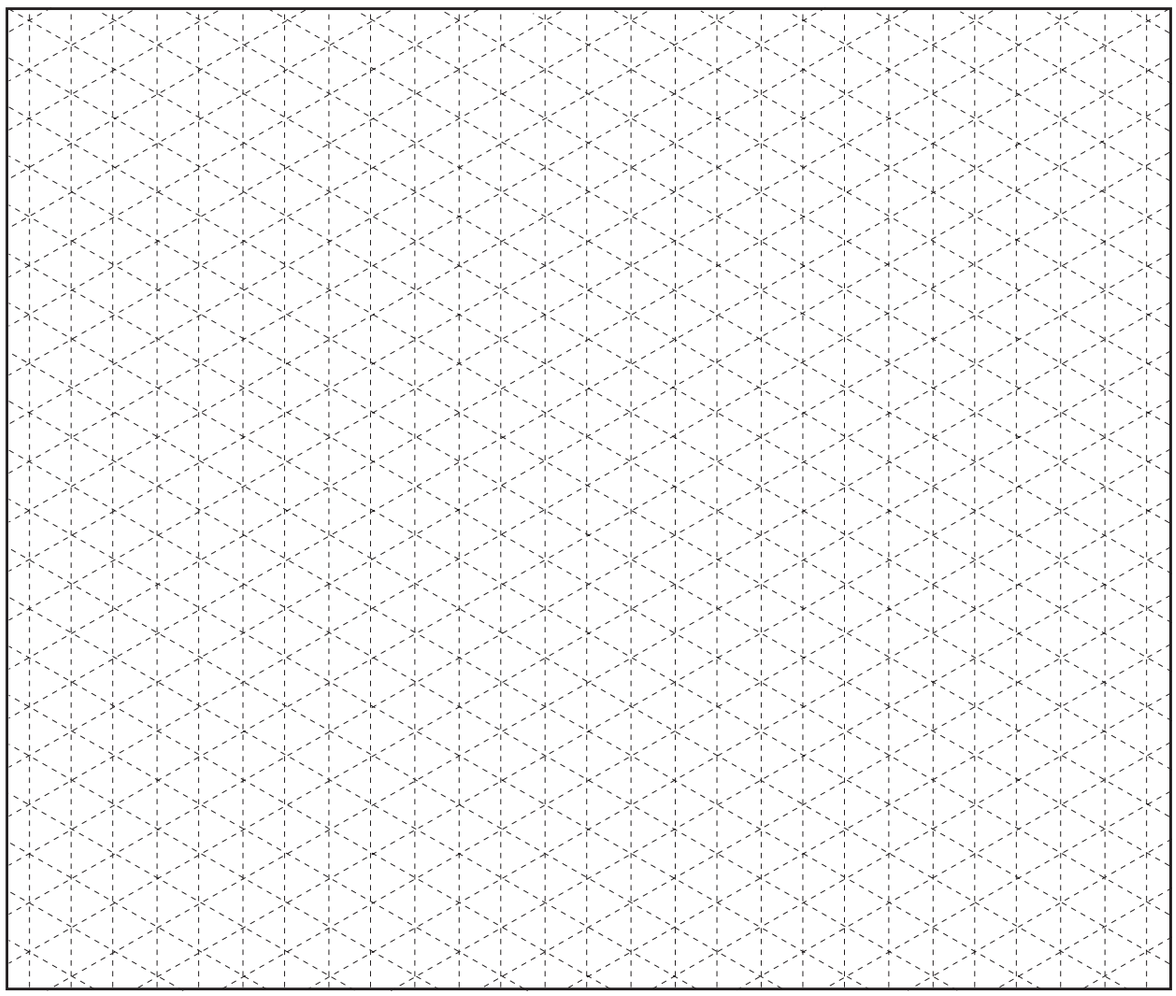
Right Rear Profile



SPF04 Answer Sheet #11C Name:_____ WCC ID: @00_____

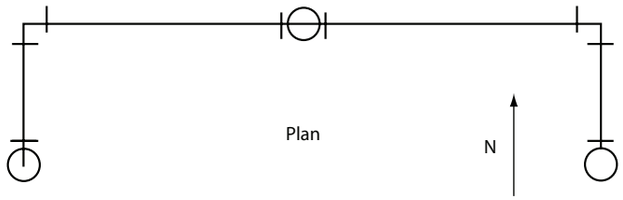
3. Convert the plan and elevation views below to an isometric drawing.

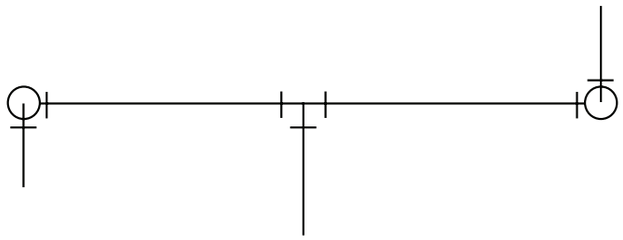




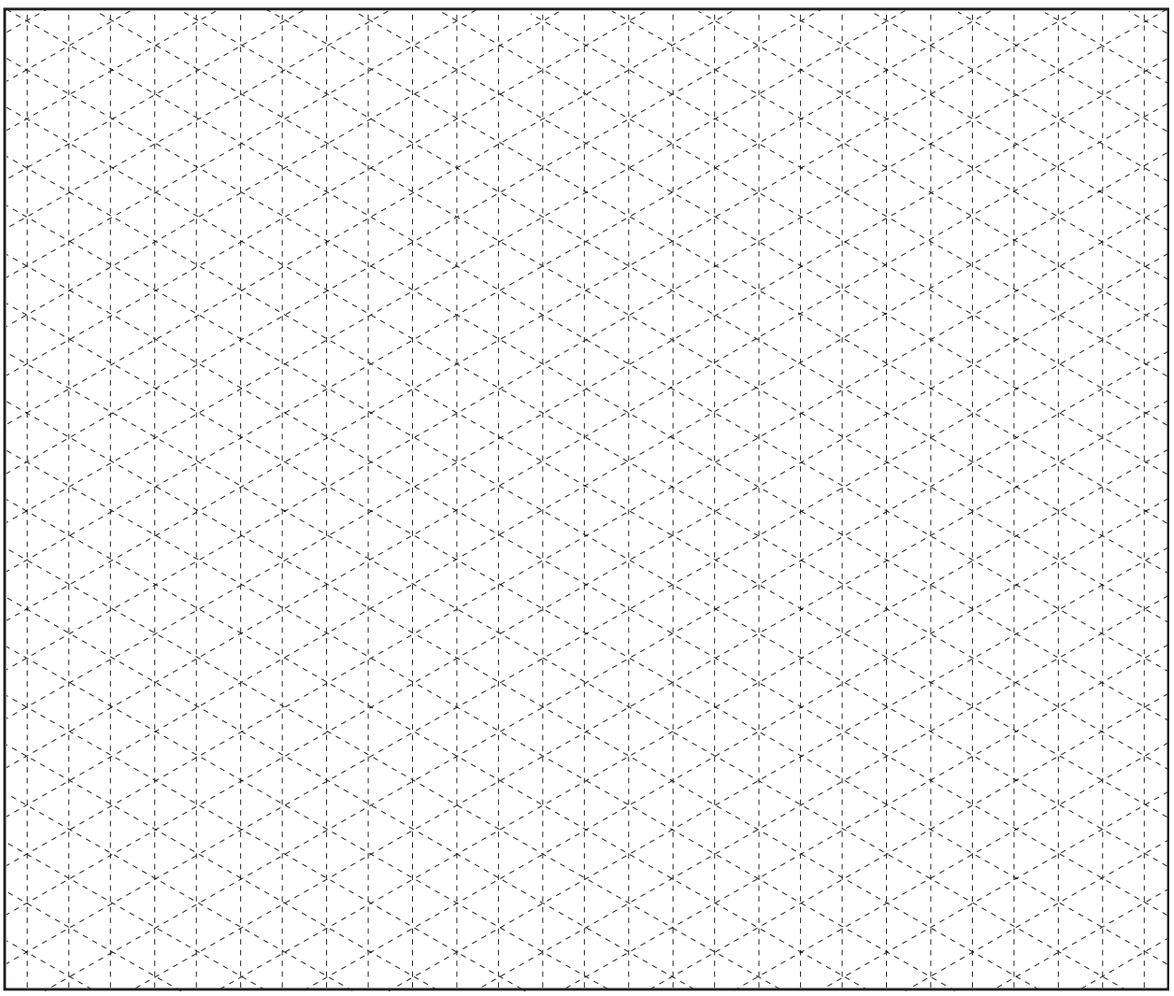
Questions for Lesson #11C

4. Convert the plan and elevation views below to an isometric drawing.





South Elevation



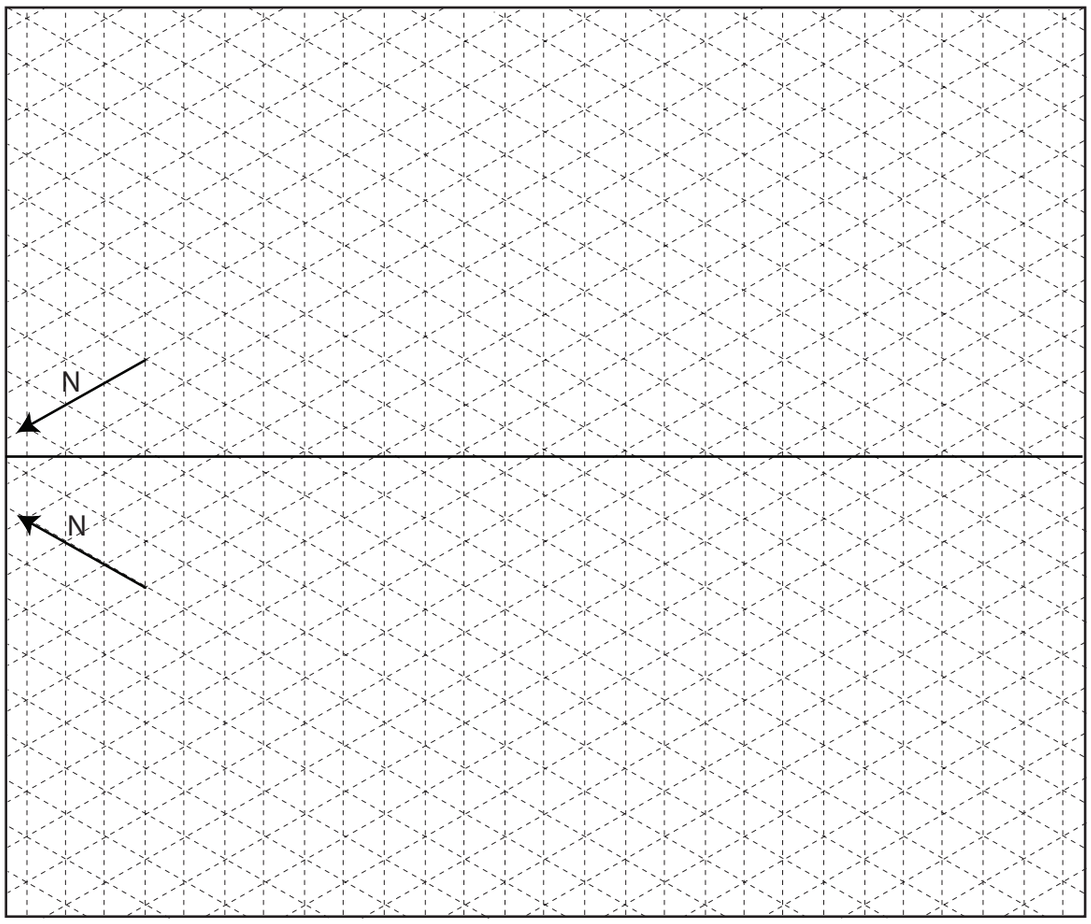
SPF04 Answer Sheet #11C Name:_____ WCC ID: @00_____

Questions for Lesson #12C

Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**

1. Draw a southwest view and a northwest view of the building shown in Figure 12.2. **The west side has two windows and the north side has one door.**

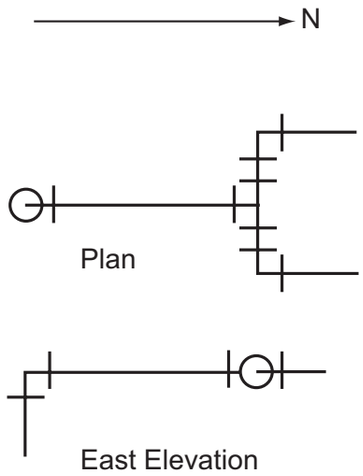
Northwest

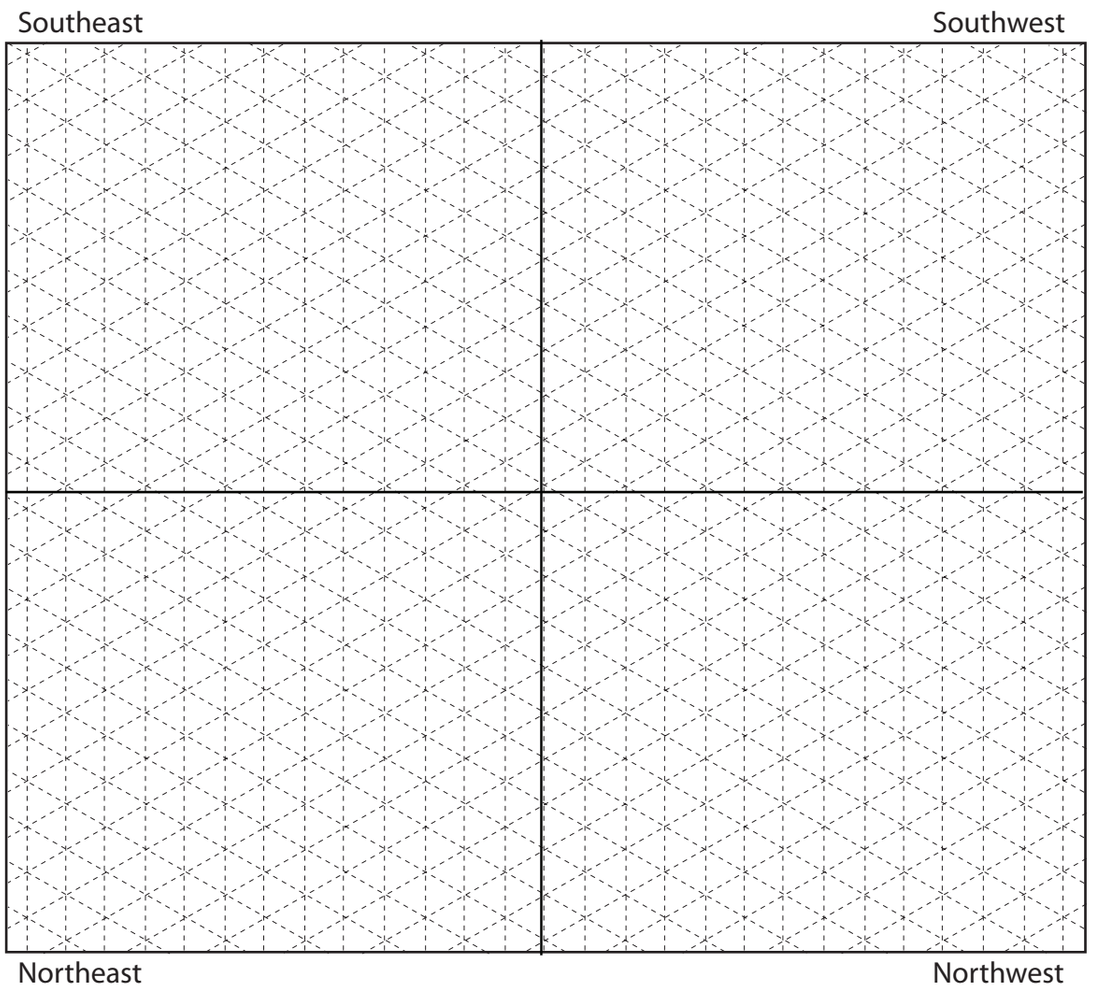


Southwest

SPF04 Answer Sheet #12C Name:_____ **WCC ID: @00**_____

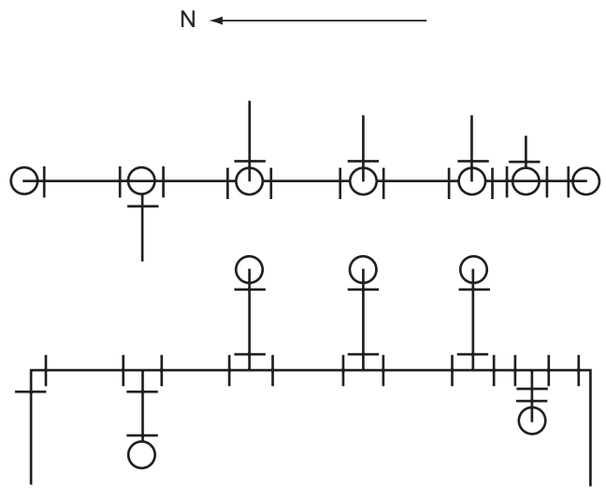
2. Draw all four Isometric views of the piping in the figure below.



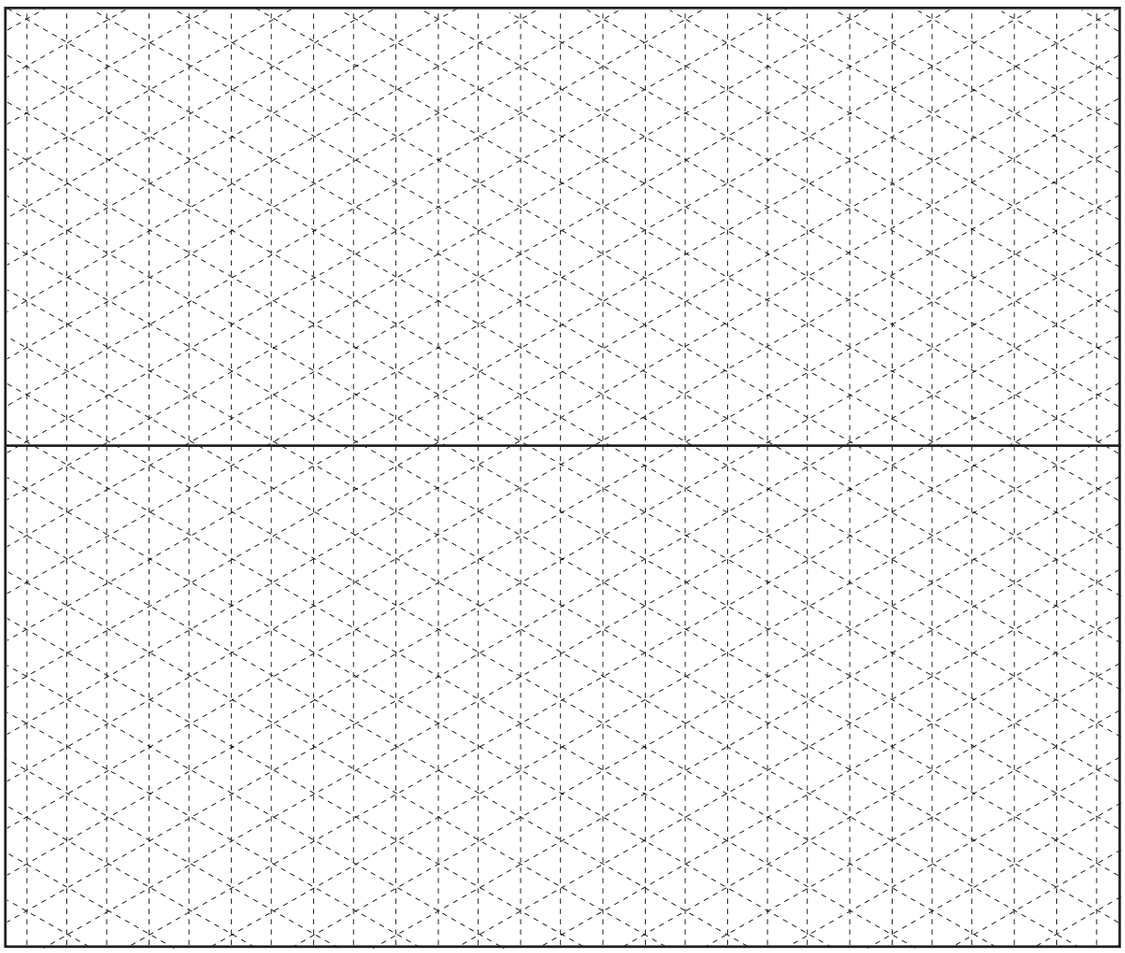


Questions for Lesson #12C

3. Draw the southeast and the northwest isometric views of the piping shown in the figure below.

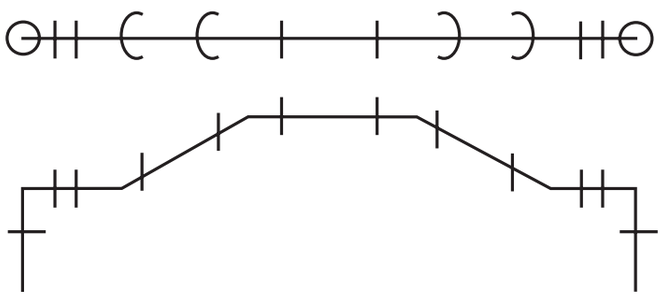


West Elevation



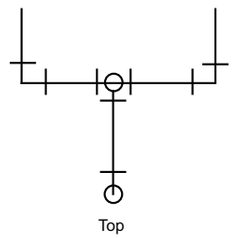
SPF04 Answer Sheet #12C Name:_____ WCC ID: @00_____

4. Draw a southeast isometric view of the piping below.

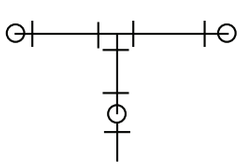


Questions for Lesson #13C

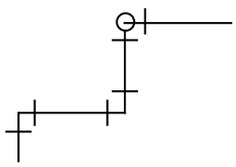
Record your final answers in the corresponding spaces below. Show all calculations when necessary. **Submit to WCC for correction with the provided lesson scantron. You must use a new answer sheet every time you submit this lesson quiz for correction.**



Top

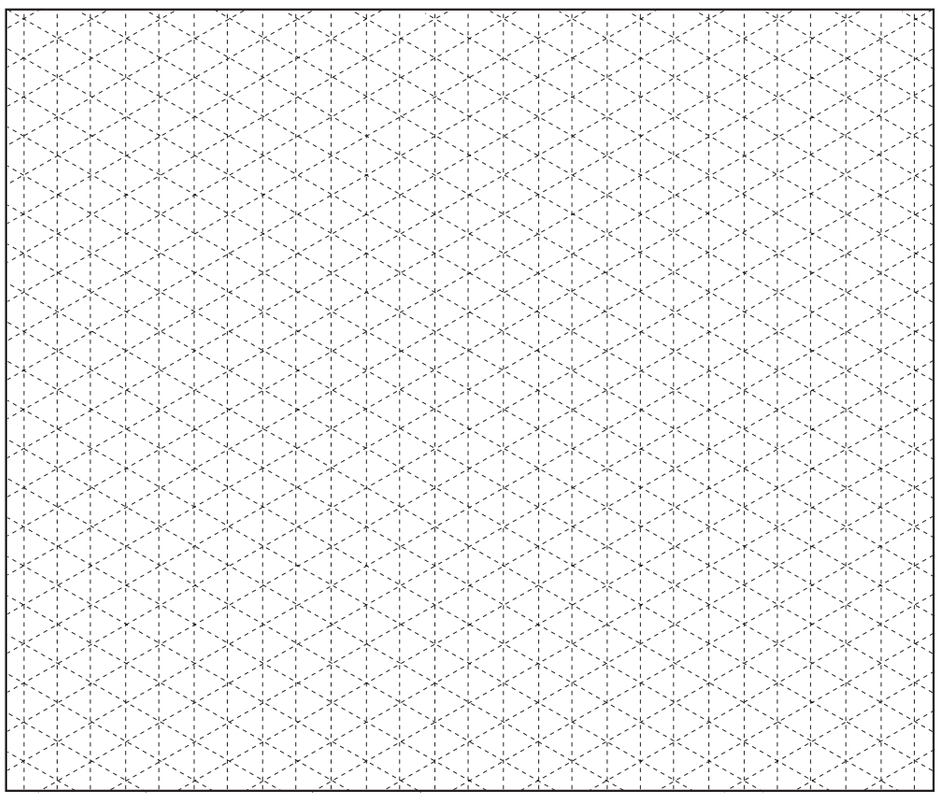


Front



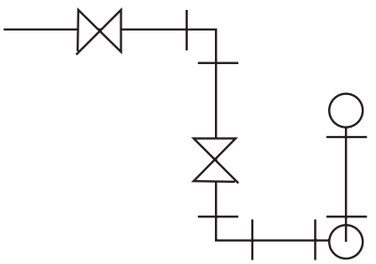
Right Side

1. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.



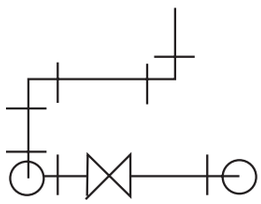
SPF04 Answer Sheet #13C Name:_____ WCC ID: @00_____

Questions for Lesson #13C



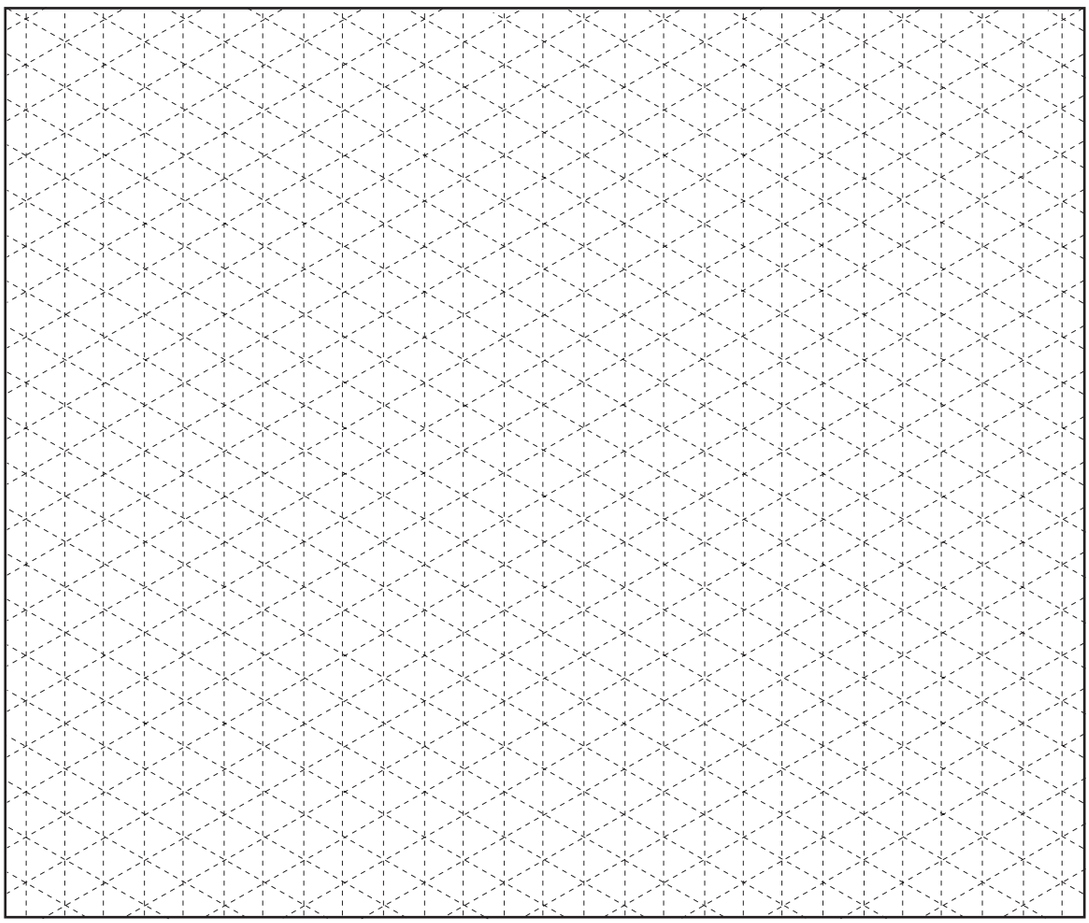
Top

Front



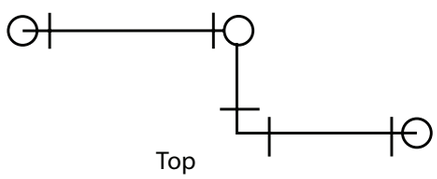
Right Side

2. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.

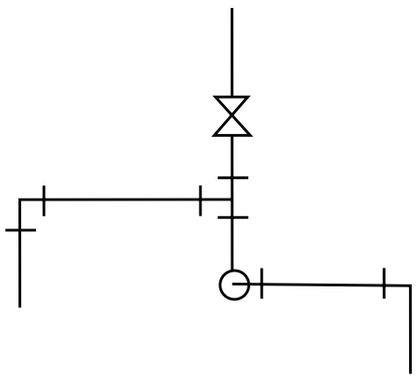


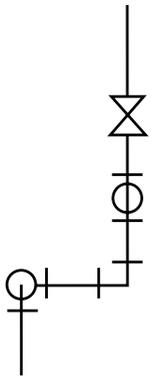
SPF04 Answer Sheet #13C Name:_____ WCC ID: @00_____

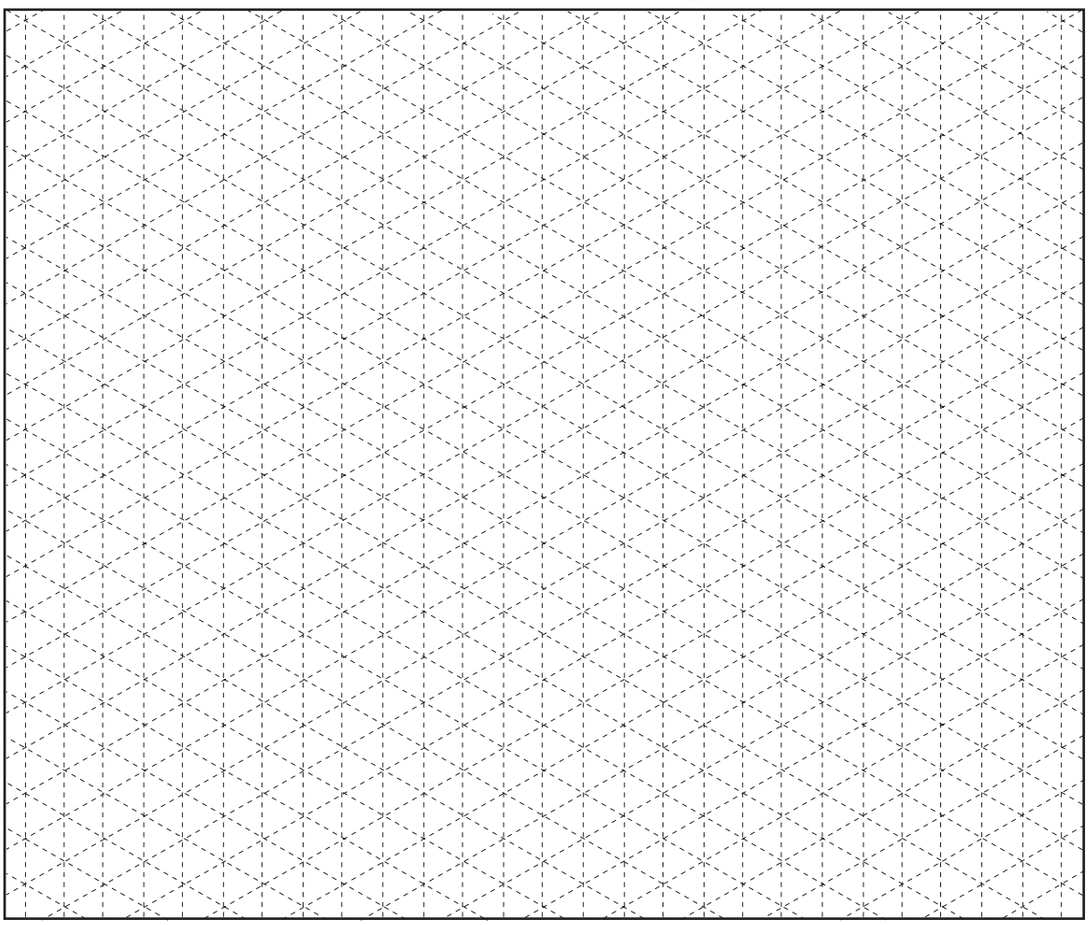
Questions for Lesson #13C



3. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.

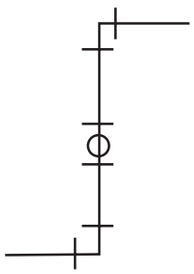




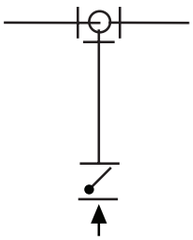


SPF04 Answer Sheet #13C Name:_____ WCC ID: @00_____

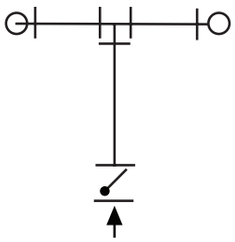
Questions for Lesson #13C



Top

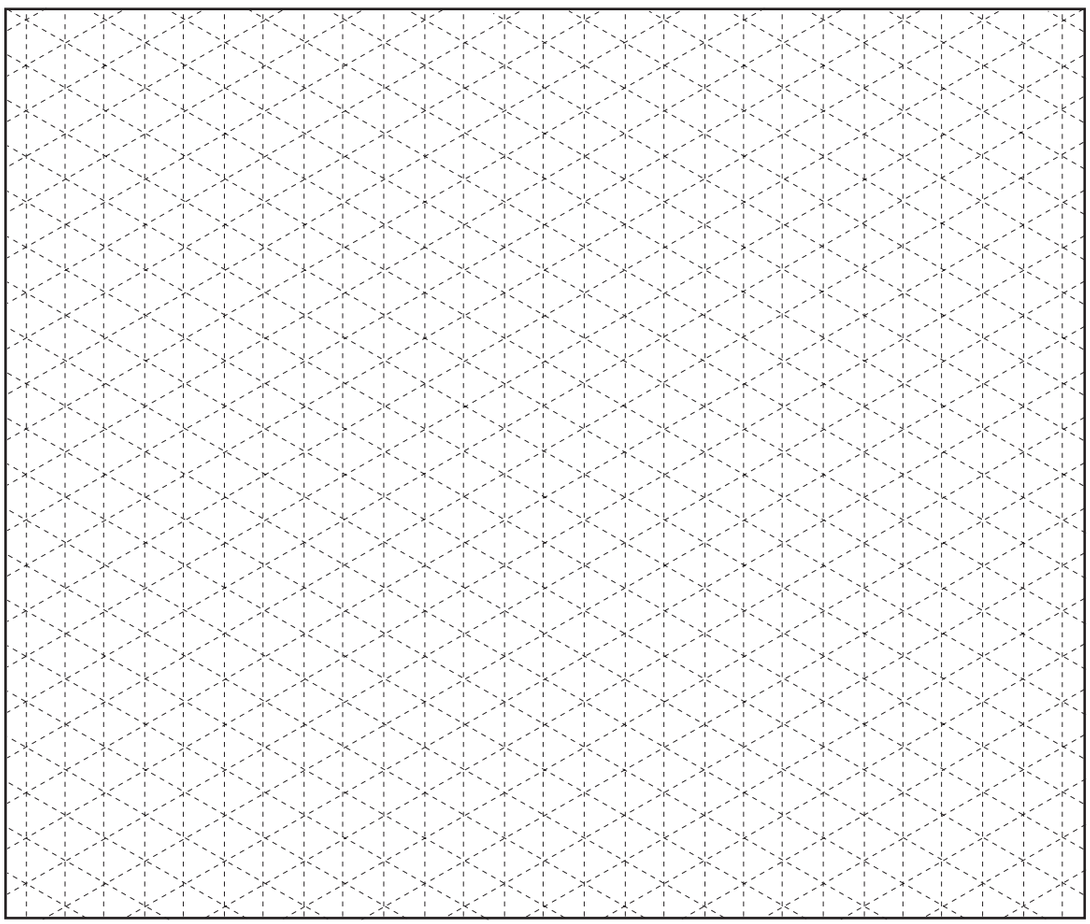


Front



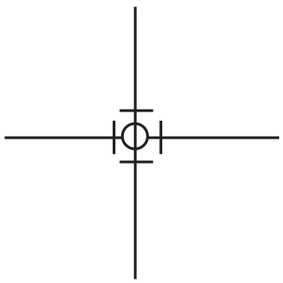
Right Side

4. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.

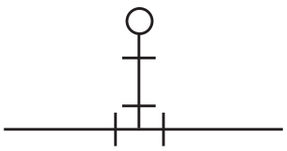


SPF04 Answer Sheet #13C Name:_____ WCC ID: @00_____

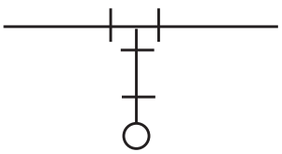
Questions for Lesson #13C



Top

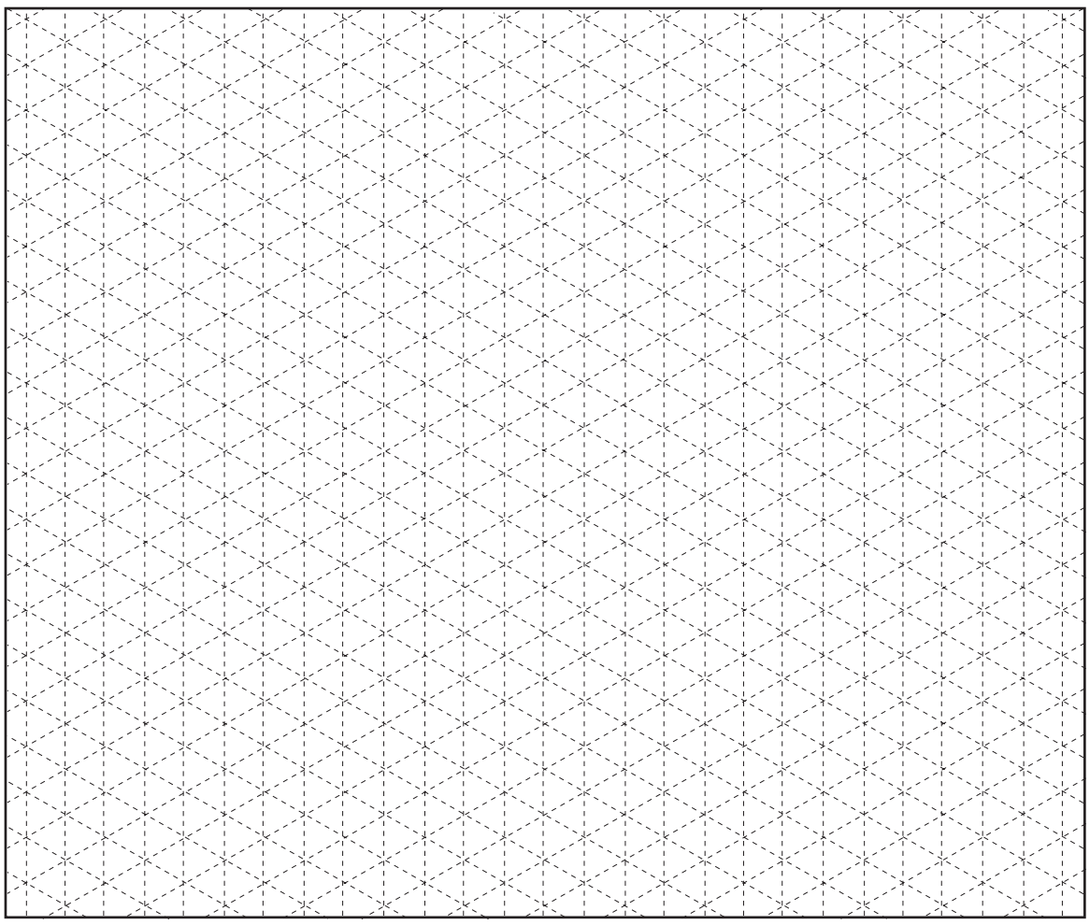


Front



Right Side

5. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.



SPF04 Answer Sheet #13C Name:_____ WCC ID: @00_____