Questions for Lesson #1B

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. Blueprinting, diazo printing, xerography and microfilming are a number of ways to make duplicates of a drawing. These methods are incorrectly grouped together and called _____.

   _____

2. Name a process used to reduce large drawings into small film copies.

   _____

3. Of the five lines used on a drawing, the _____ is the most important.

   _____

4. This type of line used on a drawing is a thin, dark solid line but does not touch the object. What is it called?

   _____

5. Other than the name of the object and the drawing number, list two additional types of information that may be found in a title block.

   _____

   _____

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

6. What type of line is the line lettered (A) in the top view?

   _____

7. Lines (E) and (G) in the right side view are dimension lines.

   A. True

   B. False

8. What is the scale of the drawing?

   _____

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

9. What are the hidden lines (G) and (K) indicating on the drawing?

   _____

10. List all center lines.

    _____

    _____

SPF04 Answer Sheet #1B Name:_____ WCC ID: @00_____

11. What type of line are lines (B), (F), and (J)?

    _____

12. What type of material is required to manufacture this part?

    _____

Questions for Lesson #2B

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. In a front view, what two dimensions are usually found?

   _____ _____

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

   _____

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

   _____

4. In the building trade, the elevation view is the same as a _____ view for other drawings.

   _____

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

   A. True

   B. False

6. Only those views which help with the interpretation of the object are shown on a drawing.

   A. True

   B. False

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

   _____

8. What three dimensions do all objects have?

   _____

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

   _____

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

10. What type of line is line (E)?

    _____

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

    _____

12. What letter in the front view represents surface (F) in the top view?

    _____

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

13. Letters (G), (H), and (J) represent the same surface.

    A. True

    B. False

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

    A. True

    B. False

15. What does the line (D) represent in the top view?

    _____

Questions for Lesson #3B

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. Within a two-view drawing, besides the front view, what are the other possible views?

_____

4. In Fig. 3.1 why isn't there a top view?

_____

_____

5. A hidden line on a drawing represents what?

_____

_____

6. When a part is _____ in shape, one view is adequate to describe it.

_____

7. In a one-view drawing, how is a diameter indicated on a drawing?

_____

8. What other reference is used on a one-view drawing to indicate the part is cylindrical?

_____

9. 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.

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

_____

11. What is the name given to the line represented by the letter (E)?

_____

12. What is the dimension between surface (K) and surface (F) in the front view?

_____

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

Questions for Lesson #4B

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. Give two reasons for placing dimensions on a drawing.

   _____

   _____

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

   _____

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

   _____

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

   _____

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

   _____

6. What is the location where dimensions are usually placed on a drawing in reference to the part?

   _____

7. In Fig. 4.3, what is the distance between adjacent dimensions?

   _____

8. In general, all dimensions on a piping drawing are given as the _____ distance between the piping.

   _____

9. The lengths of straight runs of pipe are normally not given.

   A. True

   B. False

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

    _____

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

11. What encircled letter in the top view represents the letter (E) in the front view?

    _____

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

    _____

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

    _____

14. What is the name of the line indicated by the letter (D) in the top view?

    _____

15. What is the depth of the recessed area indicated by the hidden lines in the top view?

    _____

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

16. What is the center-to-center distance from the tee on the 2" line from the exhauster to the trip device?

    _____

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

    _____

18. What is the center-to-center distance of the ¾" lines between the exhauster and the trip device?

    _____

19. What is the distance between the 2" and 3" horizontal drain lines?

    _____

20. What is the distance between the two angle valves?

    _____

Questions for Lesson #5B

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

   _____

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

   _____

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

   _____

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

   _____

   _____

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

   _____

6. According to the text, what is a common scale used on piping drawings?

   _____

7. What determines the scale used on a drawing?

   _____

   _____

8. It is a good practice to take measurements from a drawing with a scale when constructing something.

   A. True

   B. False

9. The areas of a drawing where the scale may be found.

   _____

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

    _____

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

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

    _____

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

12. How deep is the 0.250 hole?

_____

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

13. What is the center distance between the two ⅝" holes?

_____

14. What is the size of the counterbore?

_____

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

_____

Questions for Lesson #6B

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

   _____

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

   _____

   _____

3. Name the two basic types of screw threads.

   _____

   _____

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

   _____ _____

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

   _____

6. How many classes of fits are there?

   _____

7. A callout for left handed threads is required on a drawing if other than right handed.

   A. True

   B. False

8. Name two types of threads that pertain to the sprinkler fitter.

   _____

   _____

9. Of the two types, what is the most common?

   _____

10. National Pipe Taper and National Pipe Straight are represented how on a drawing?

    _____

    _____

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

11. What is the scale of the drawing?

    _____

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

Questions for Lesson #6B

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

    _____

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

    A. True

    B. False

14. How many holes are to threaded ⅝"-11UNC?

    _____

15. In the top view, what is the distance from the edge of the plate to the center of the ¾"-16NF-2 hole?

    _____

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

Questions for Lesson #7B

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 inside portions of a drawing are shown as _____ lines in a drawing.

   _____

2. When a piece of an object is cut away and the inside is exposed, this is called a _____ view.

   _____

3. The imaginary plane that passes through an object and cuts it is called the _____.

   _____

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

   _____

   _____

5. What does the cutting plane represent?

   _____

   _____

6. What do the letters on a cutting plane represent?

   _____

7. When is a half section usually shown?

   _____

   _____

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

   _____

9. Name two objects that are not shown as being sectioned within the section view of an assembly.

   _____

   _____

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

    _____

    _____

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

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

    _____

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

12. A half section view could have been used on the swing check valve to show its inner parts.

    A. True

    B. False

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

    _____

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

    A. True

    B. False

15. The body and the bonnet of the globe valve are the same material.

    A. True

    B. False

16. The section view of the swing check valve is a full section view.

    A. True

    B. False

17. All parts of the globe valve should have been sectioned.

    A. True

    B. False

18. A half section view of the globe valve would have completely described it.

    A. True

    B. False

19. Of what material are the following check valve parts made.

Part	**Material**
Body	
Disc	
Cap	

20. What part or parts of the globe valve are not sectioned?

    _____

Questions for Lesson #8B

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

   _____

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

   _____

3. The most important factor needed for sketching is _____.

   _____

4. Why is the white eraser best for sketching?

   _____

5. To be useful, a sketch of an object must be done carefully with _____ lines.

   _____

6. As stated in the lesson, a horizontal line is drawn using a forearm motion from _____ to _____.

   _____

   _____

7. Other than vertical, angular, and horizontal lines, name a more difficult shape to sketch freehand.

   _____

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

   _____

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

9. A left side view of "Block A" would show more detail than the right side view.
   A. True
   B. False

10. View "A" is a bottom view of "Block A".
    A. True
    B. False

11. View "E" is a top view of "Block A".
    A. True
    B. False

12. Views "B" and "C" are incorrect. View "B" is the right side view of "Block A."
    A. True
    B. False

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

13. The preferred number of views for the welding coupling is: 2, 3, or 1.

    _____

14. What is the wall thickness of the welding coupling?

    _____

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

    A. True

    B. False

Questions for Lesson #9B

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

   _____

2. A working sketch shows the same information as a blueprint.

   A. True

   B. False

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

   _____

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

   _____

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

   _____

   _____

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

   _____

   _____

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

   _____

   _____

   _____

   _____

   _____

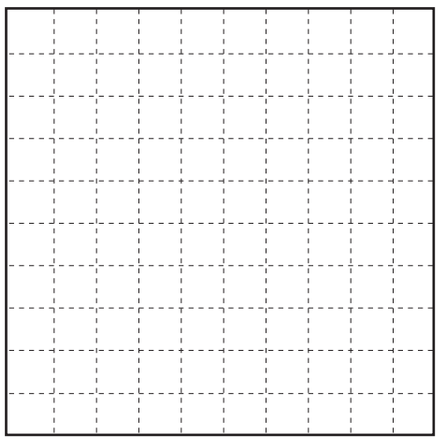
   _____

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

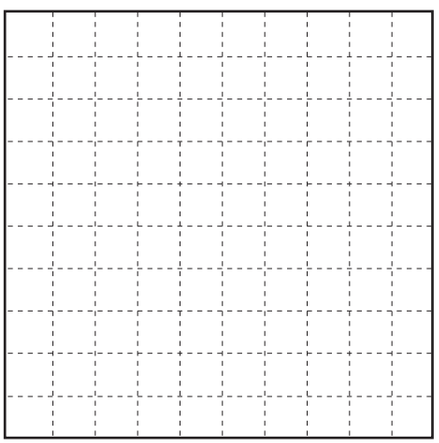
Refer to Drawing 12 in the Appendix to answer the following questions.

8. In the spaces provided below, sketch three views of the pipe support using the method described within the chapter. Note: Grid is ¼" squares.

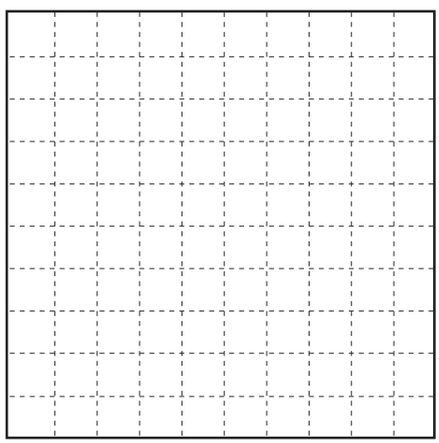
9. Place dimensions on the sketch in their appropriate locations.



Top



Front



Right side

10. What is the distance from the center of the hole to the top edge of the pipe support.

_____

11. What is the size of the hole in the top of the flat iron hanger ring?

_____

12. What would be the actual shape of the right side view of the hanger ring?

_____

Questions for Lesson #10B

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 definition for the word isometric?

   _____

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

   _____

3. 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 isometric drawings.

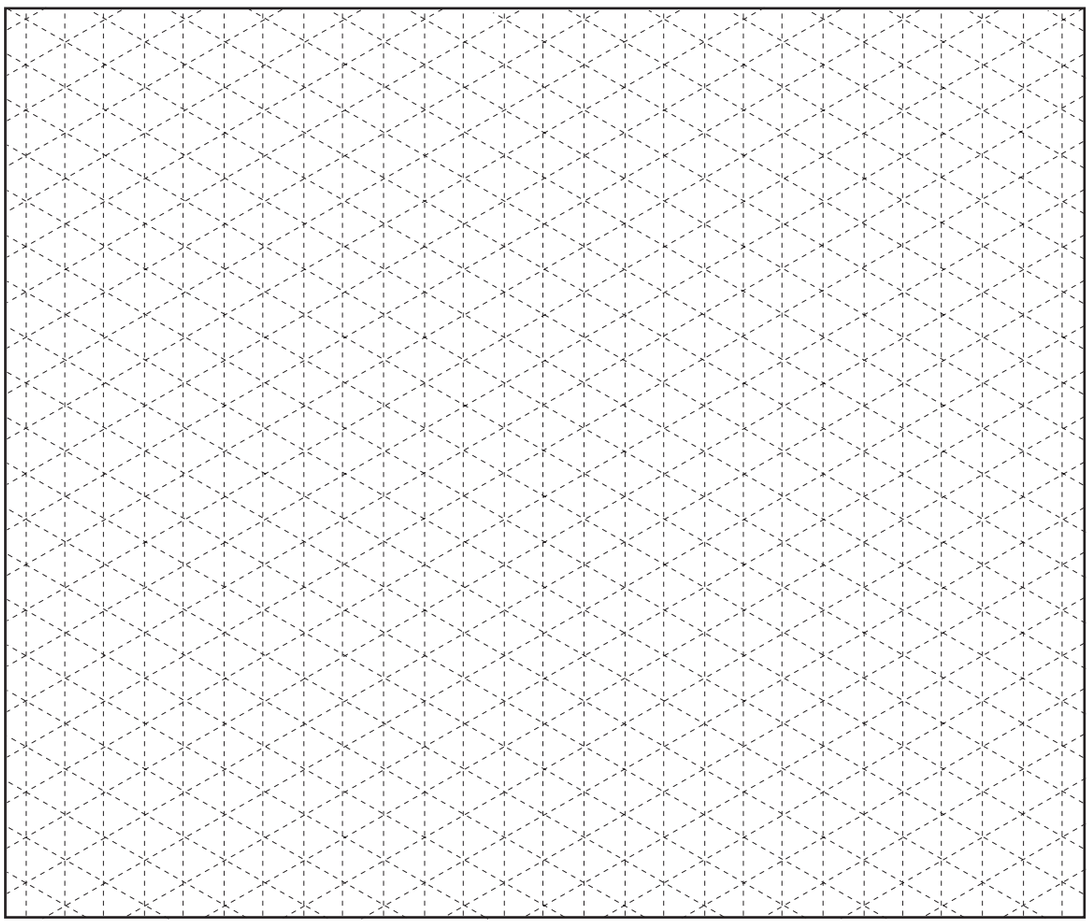
   Figures

2.1	
2.3	
5.6	
7.1	

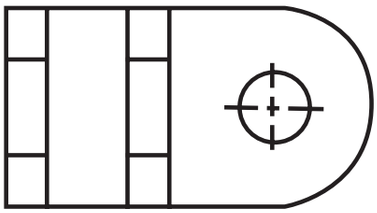
4. Isometric sketches will be of particular value in visualizing piping layouts to whom?

   _____

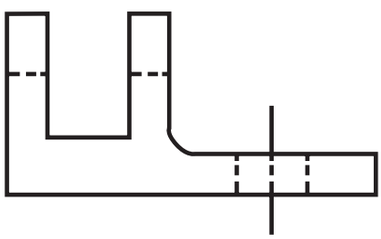
5. Use the grid below to create an Isometric sketch of the object shown in Drawing 13. Note: Triangles are ¼" on each side.



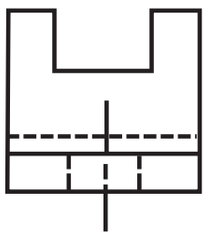
6. Use the the following views of the Key Plate (below) to create an isometric sketch.



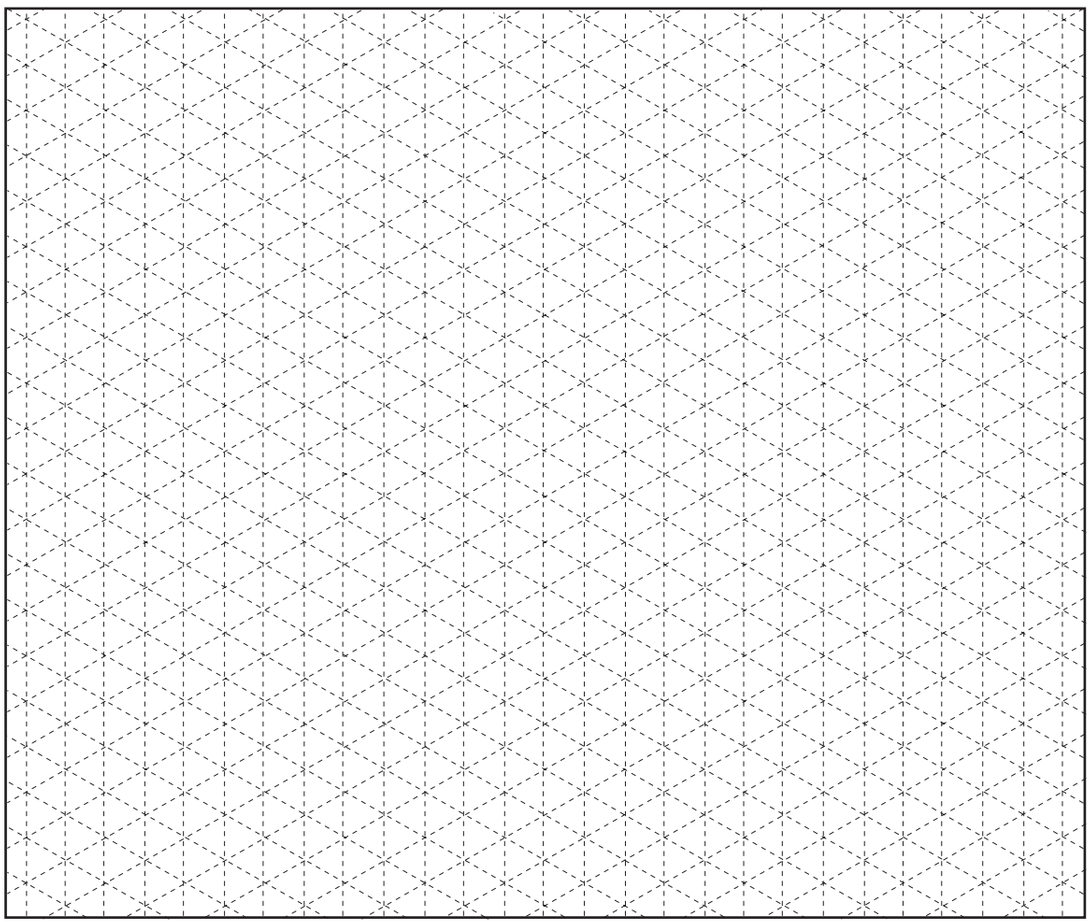
TOP



FRONT



RIGHT SIDE

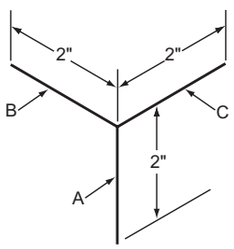


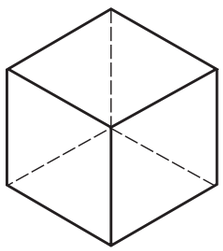
SPF04 Answer Sheet #10B Name:_____ WCC ID: @00_____

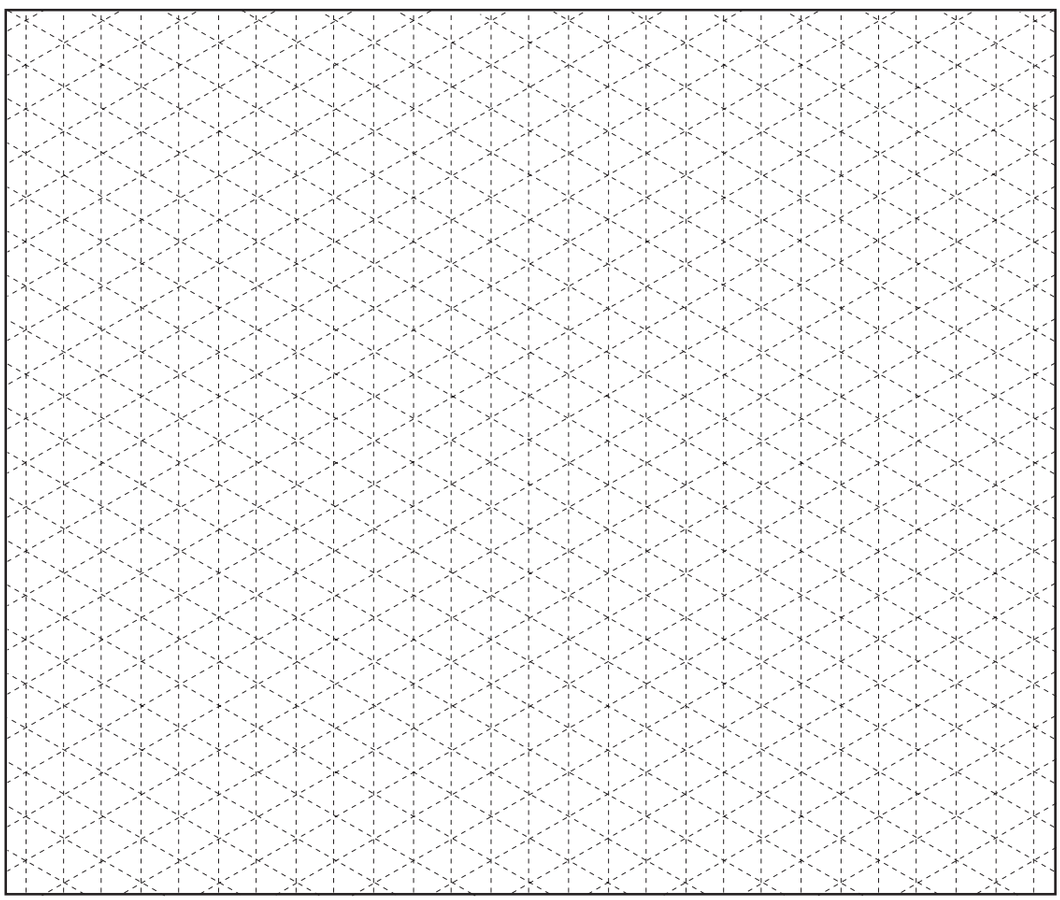
Questions for Lesson #11B

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 below. *Notes: Hidden lines not normally shown on isometric drawings. Triangles are ¼" on each side.*



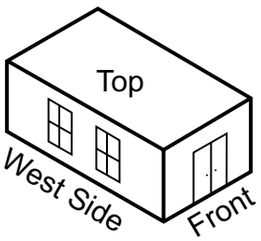




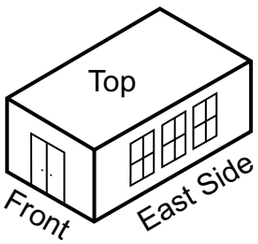
SPF04 Answer Sheet #11B Name:_____ **WCC ID: @00**_____

Questions for Lesson #11B

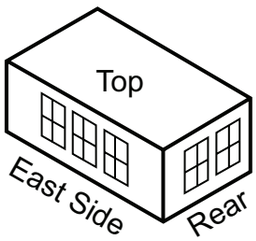
2. The figure below shows four isometric views of a small building. Draw two of the isometric views of the small building which between them show the top and the four sides. Use the dimensions 1 inch wide, ¾ inch high, and 1½ inches long.



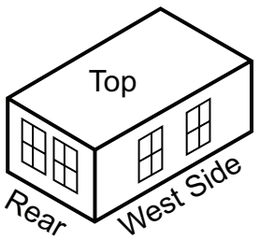
Left Front Profile



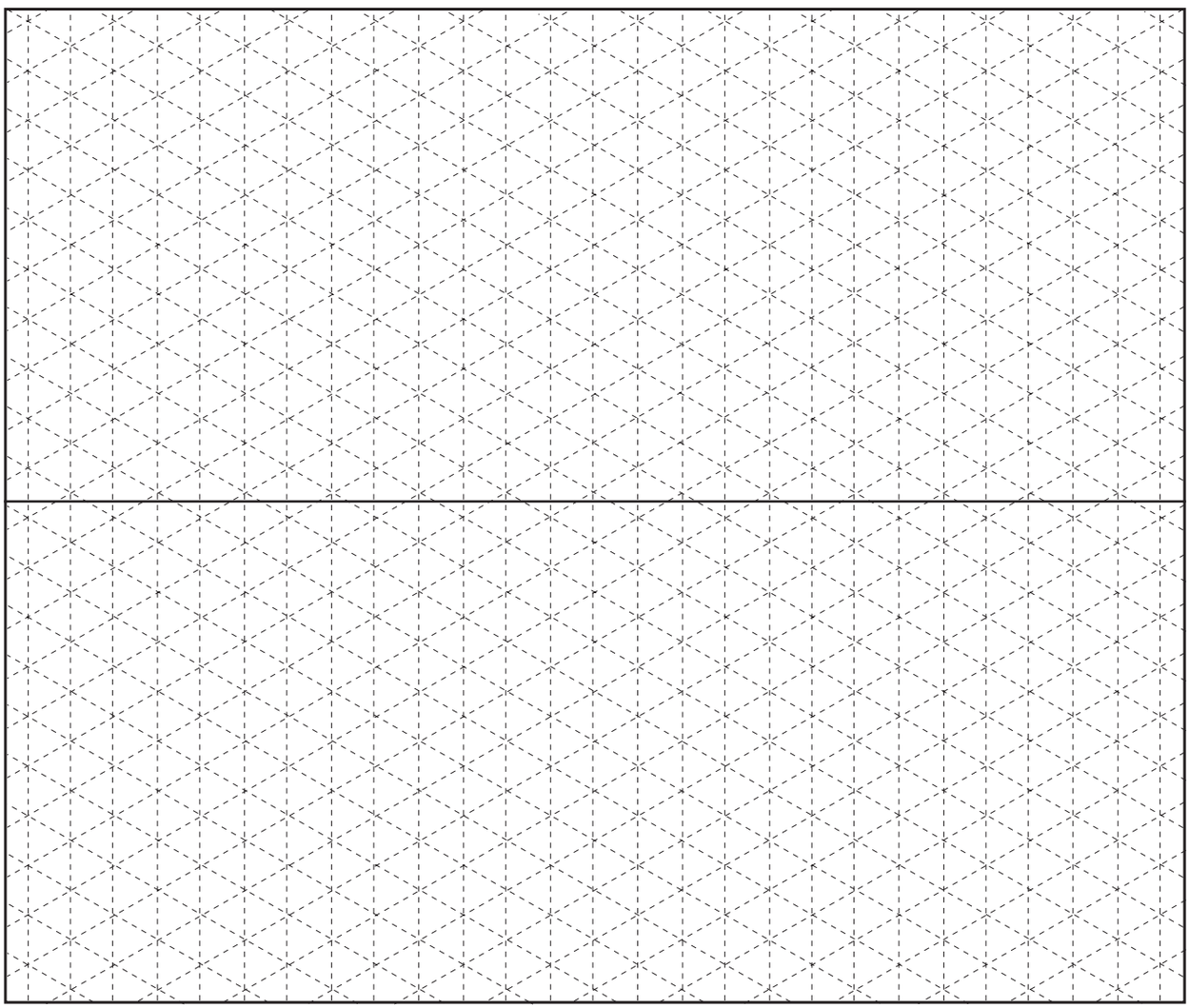
Right Front Profile



Left Rear Profile



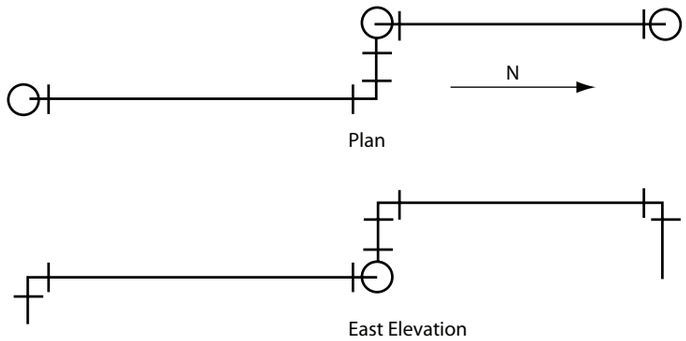
Right Rear Profile

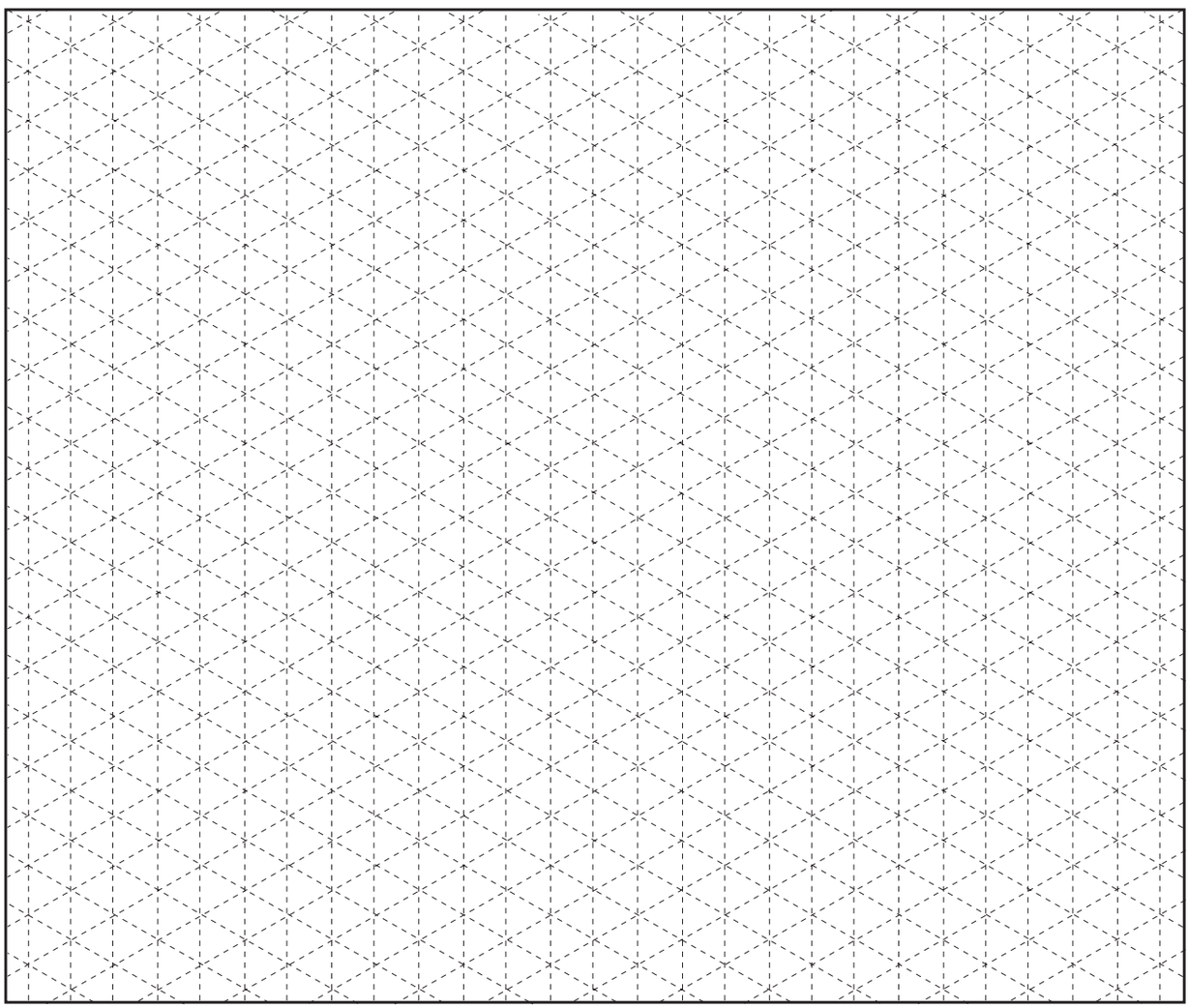


SPF04 Answer Sheet #11B Name:_____ WCC ID: @00_____

Questions for Lesson #11B

3. Convert the plan and elevation views below to an isometric drawing. Note: Triangles are ¼" on each side.

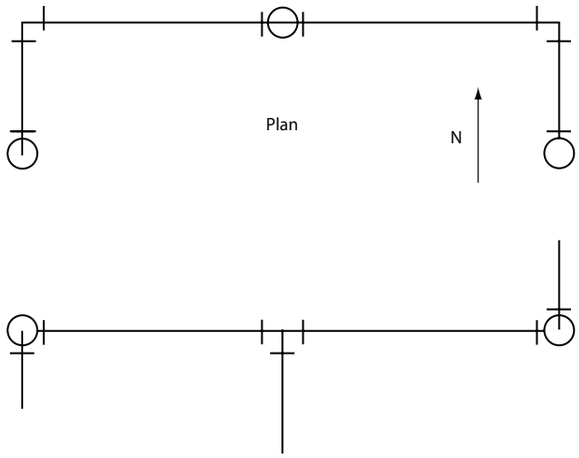




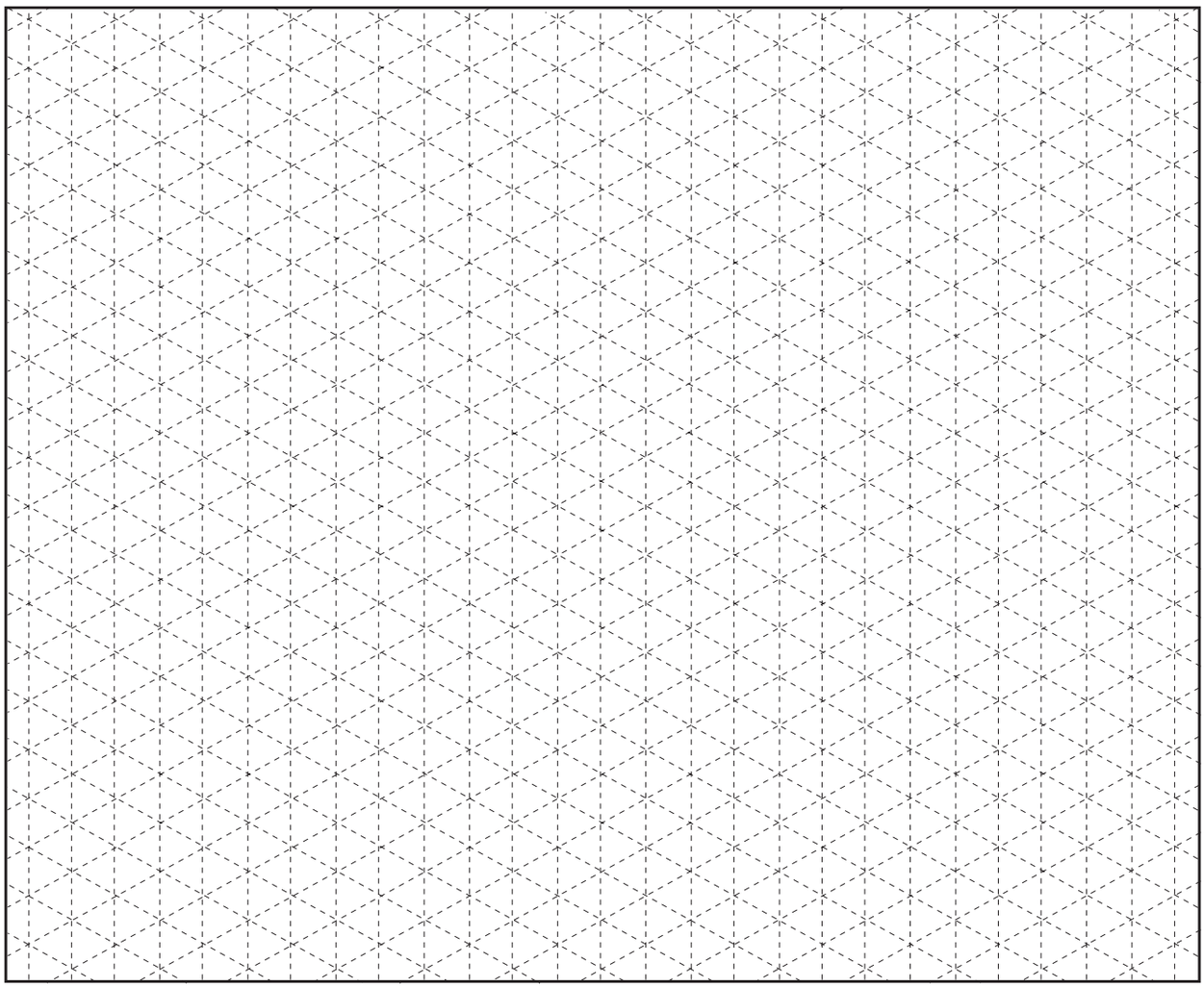
SPF04 Answer Sheet #11B Name:_____ WCC ID: @00_____

Questions for Lesson #11B

4. Convert the plan and elevation views below to an isometric drawing. Note: Triangles are ¼" on each side.



South Elevation



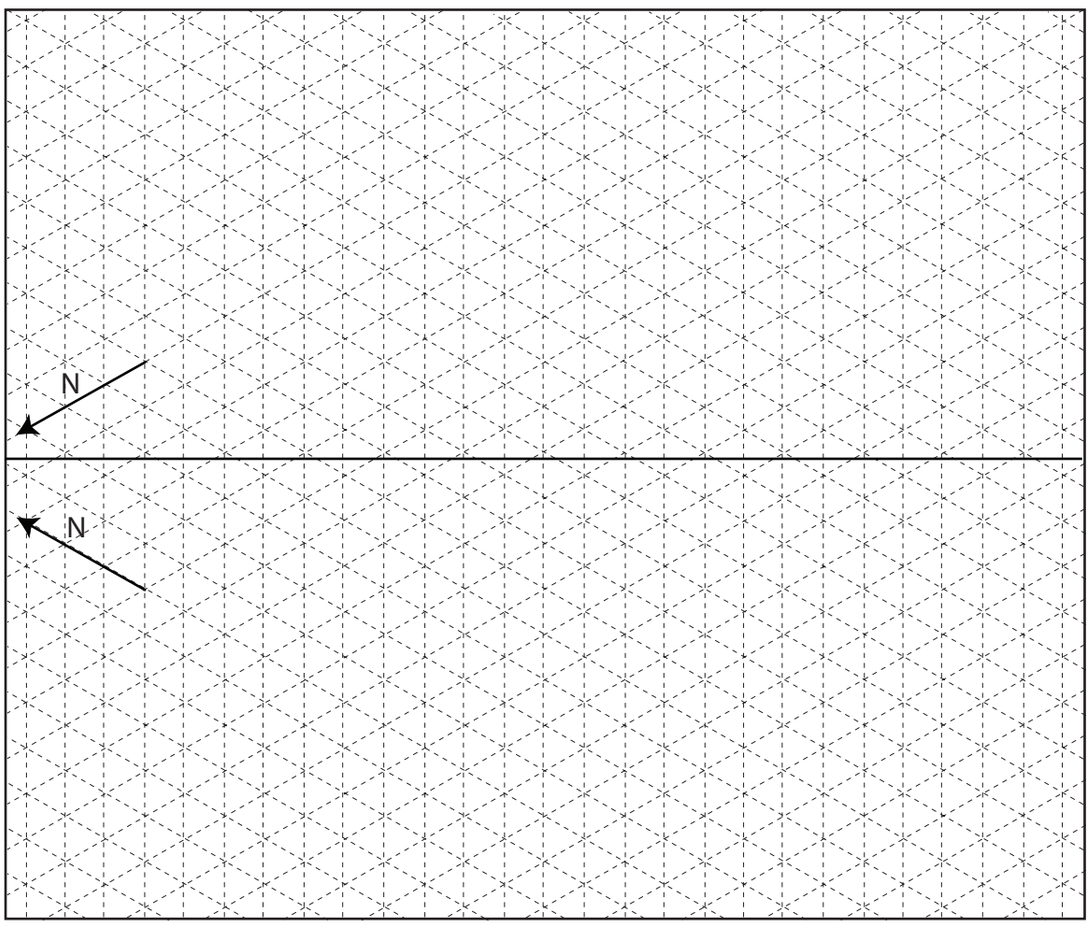
SPF04 Answer Sheet #11B Name:_____ WCC ID: @00_____

Questions for Lesson #12B

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.

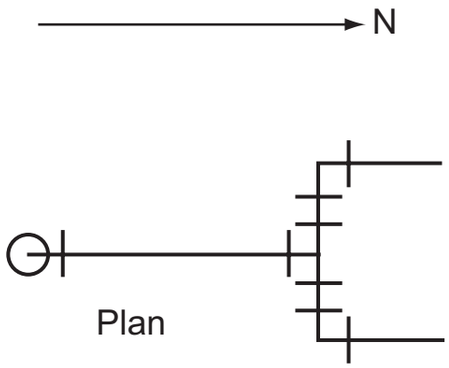
Northwest



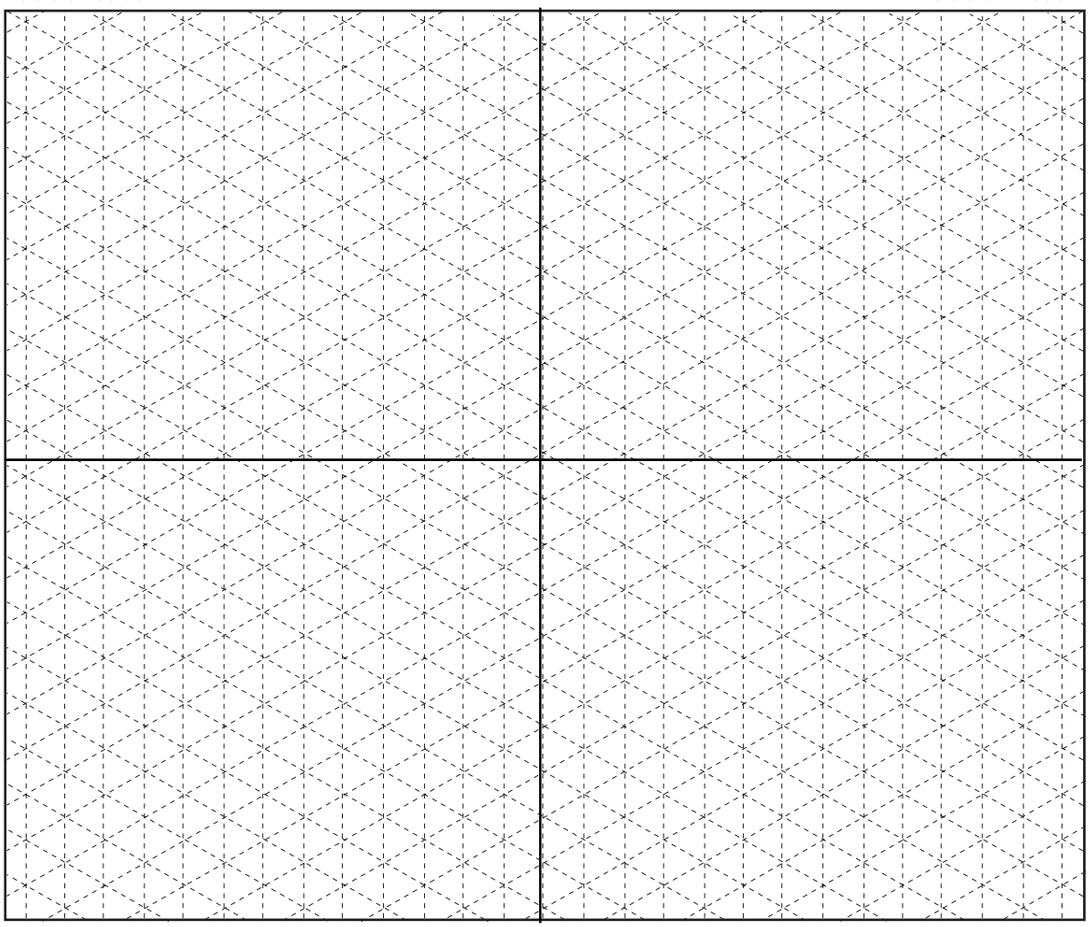
Southwest

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

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



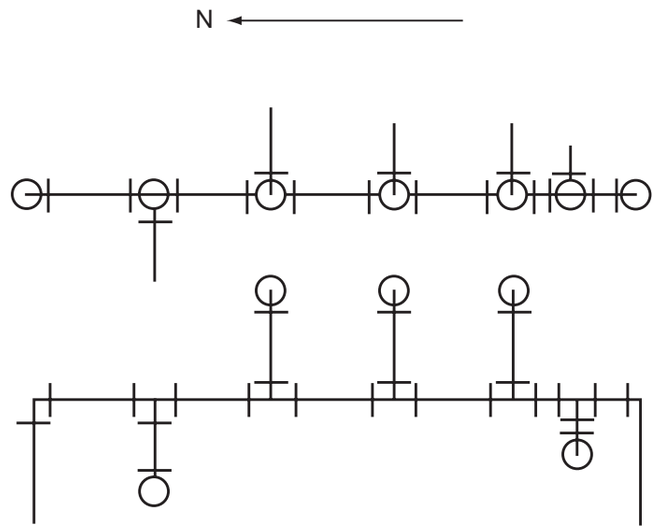
Southeast Southwest



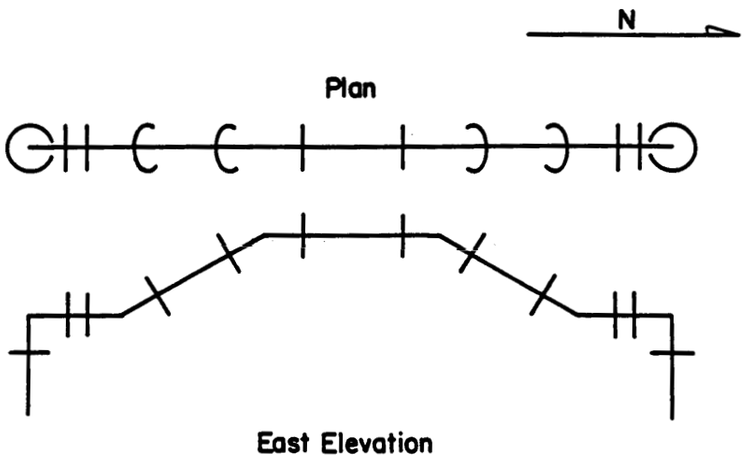
Northeast Northwest

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

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



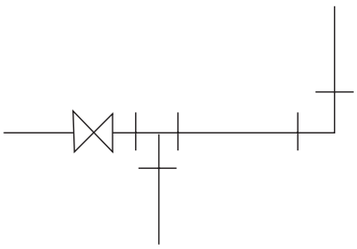
4. Draw a southeast isometric view of the piping below.



Questions for Lesson #13B

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.**

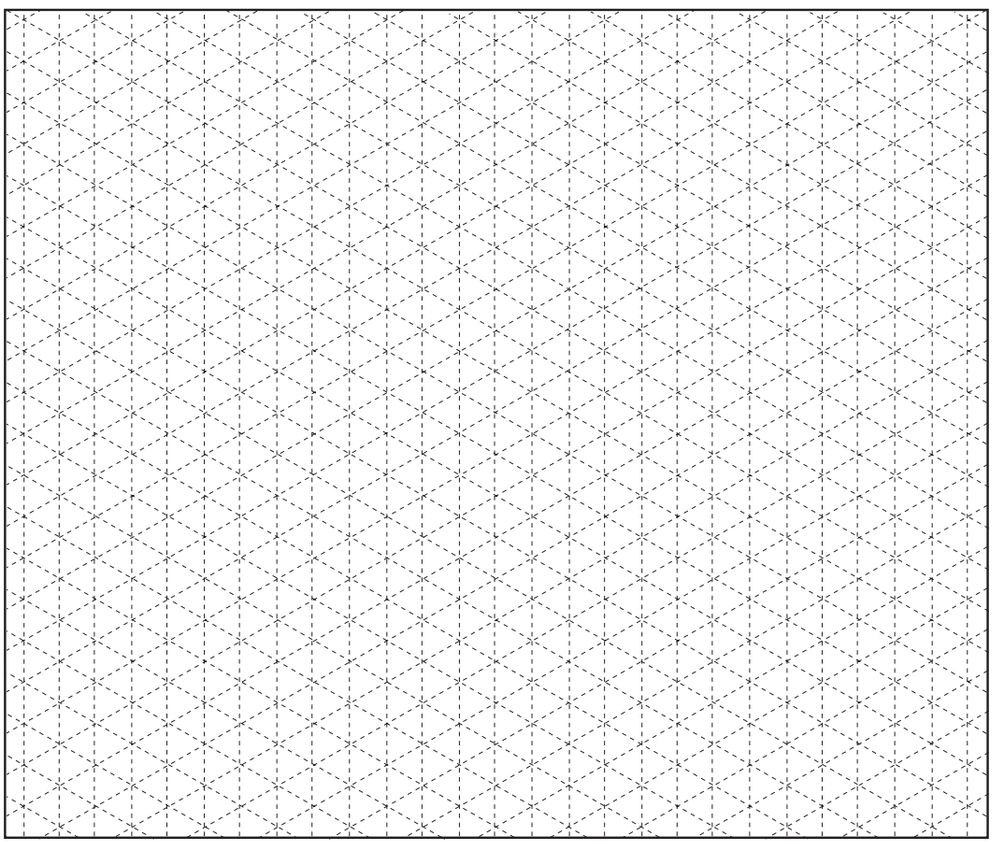
Top



Front

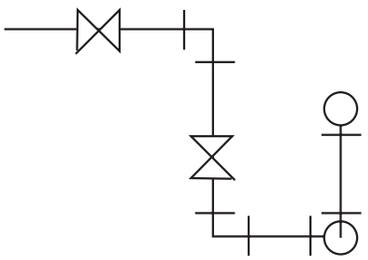
Right Side

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

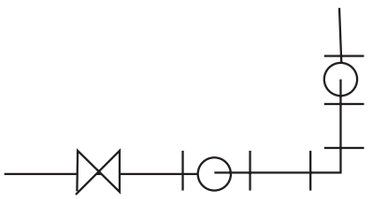


SPF04 Answer Sheet #13B Name:_____ WCC ID: @00_____

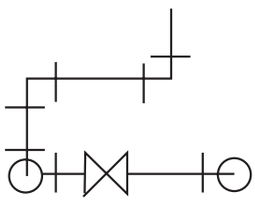
Questions for Lesson #13B



Top

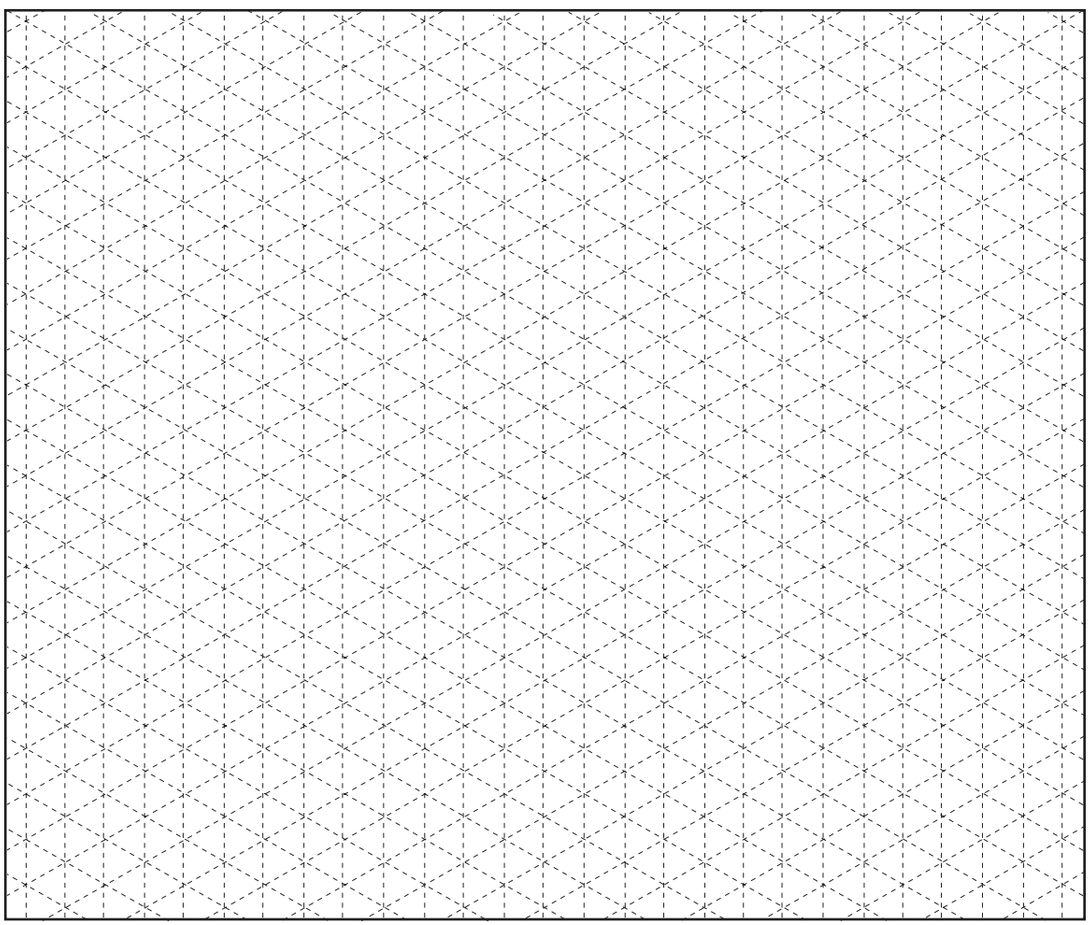


Front



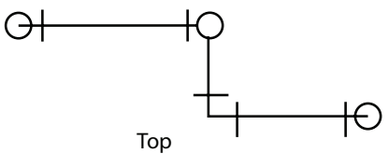
Right Side

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

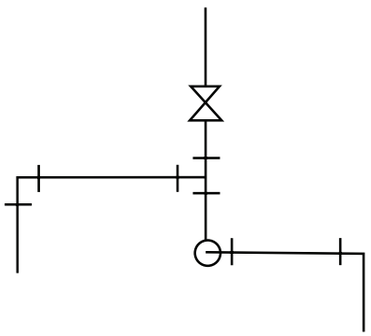


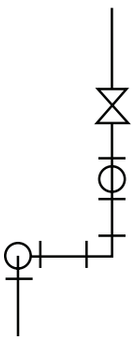
SPF04 Answer Sheet #13B Name:_____ WCC ID: @00_____

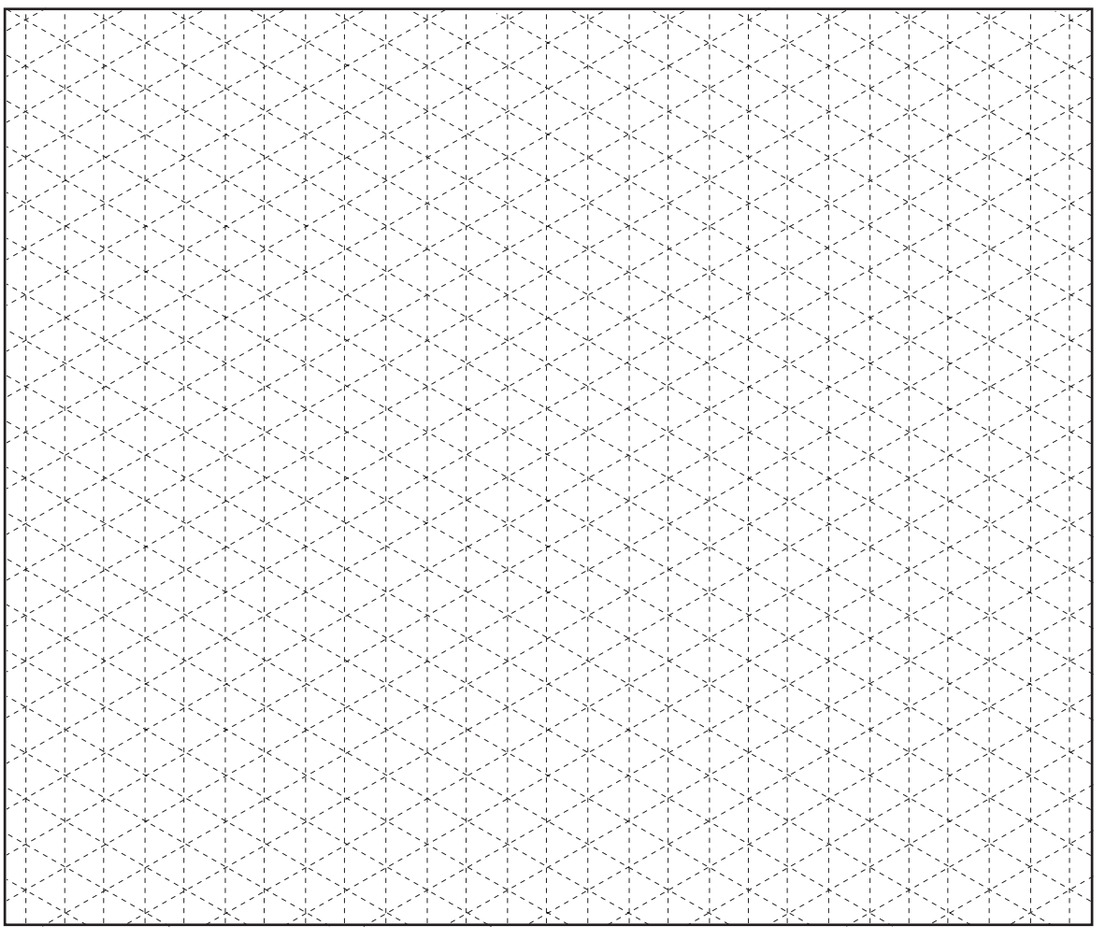
Questions for Lesson #13B



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

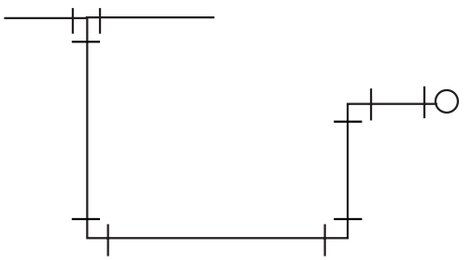






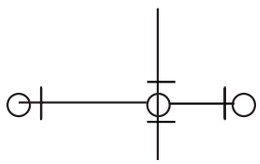
SPF04 Answer Sheet #13B Name:_____ WCC ID: @00_____

Questions for Lesson #13B



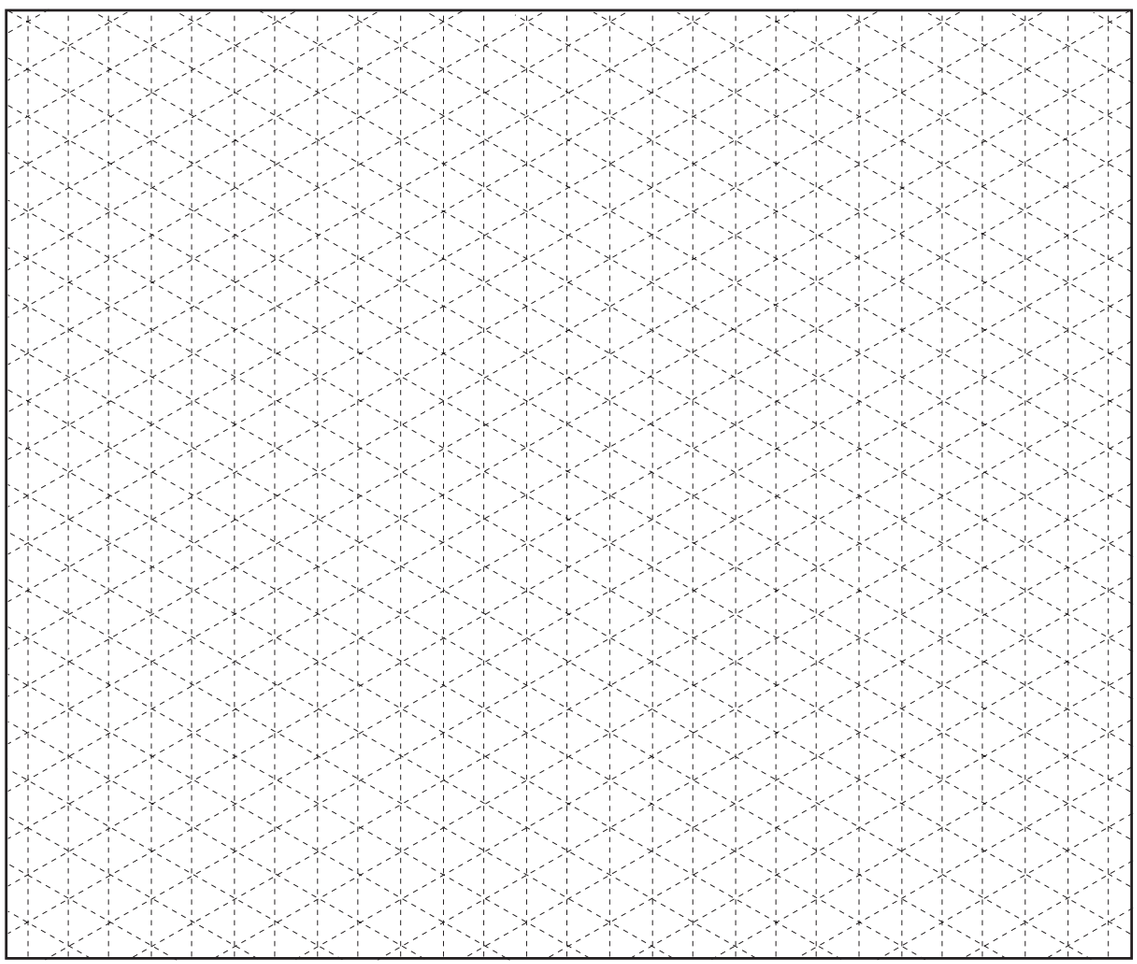
Top

Front



Right Side

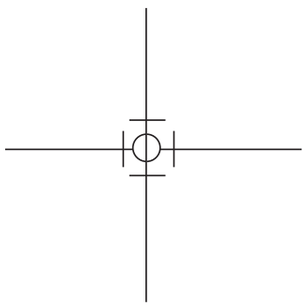
4. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.



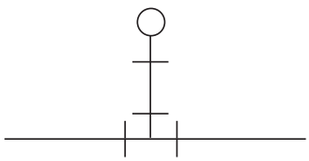
SPF04 Answer Sheet #13B Name:_____ WCC ID: @00_____

Questions for Lesson #13B

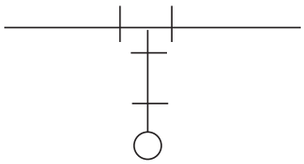
5. From the multi-view drawings provided, sketch the isometric in a single-line style. Show all fittings. Use approximately the same scale.



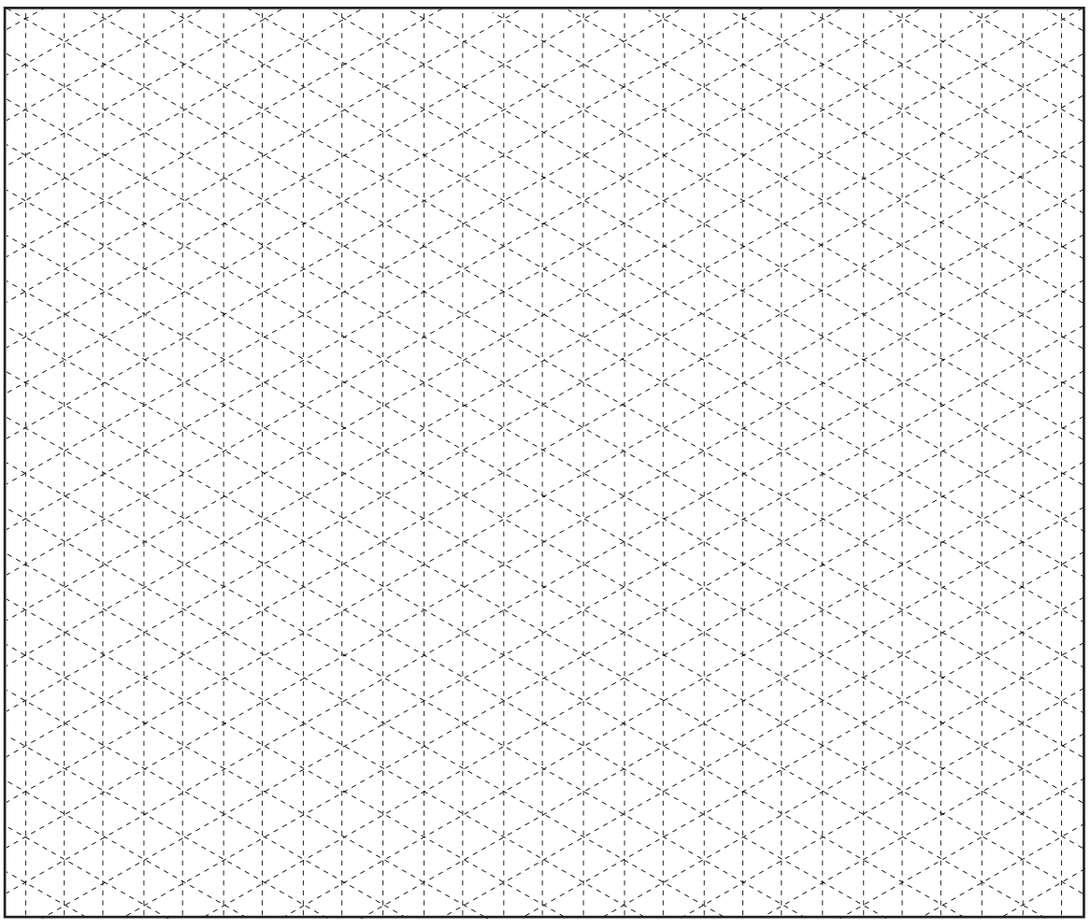
TOP



FRONT



RIGHT SIDE



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