MechDrftQB

True/False
Indicate whether the statement is true or false.

____ 1. Drafting is frequently called the “language of industry.”

____ 2. Drafters prepare working drawings from sketches and notes.

____ 3. A senior drafter is responsible for producing original work.

____ 4. Most drafters specialize in a specific area of technical drawing.

____ 5. Industrial designers should have a background in engineering.

____ 6. Interior designers originate designs for machine tools.

____ 7. Modelmakers must be able to interpret drawings.

____ 8. A good leader must be able to delegate assignments to others.

____ 9. A line is sketched by making a series of short, overlapping strokes.

____ 10. Thin construction lines should be drawn first when sketching objects.

____ 11. A right-handed drafter should sketch vertical lines from the bottom of the sheet upward.

____ 12. Construction lines are the heaviest lines used in sketching.

____ 13. Object lines indicate visible edges of an object.

____ 14. Dimension lines and extension lines are drawn to the same line weight.

____ 15. When determining which line should be displayed when lines overlap on a drawing, object lines take priority over hidden lines.

____ 16. A 60° angle is known as a right angle.

____ 17. Construction lines are used to represent the centers of round objects.

____ 18. Border lines are drawn approximately .047″ thick.

____ 19. Dimension lines should be drawn with a 4H or 6H pencil.

____ 20. When darkening lines on a drawing, circles and arcs should be darkened before straight lines.

____ 21. The use of drafting tape is the preferred method to attach a drawing sheet to the drawing board.

____ 22. Specifying the coordinate entry (3,4) locates a relative coordinate.

____ 23. A drilled hole in an object represents positive mass.

____ 24. As a rule, when making a multiview drawing, the view selected as the side view should show the most visible features of the object.

____ 25. One method of centering a drawing on a drawing sheet is to create a centering rectangle.

____ 26. A size dimension specifies how large a particular feature is.

____ 27. A zero should precede the decimal point for decimal inch dimension values less than 1″.

____ 28. Arcs are dimensioned by specifying the diameter.

____ 29. Metric dimensions can be converted to decimal inch dimensions using a conversion chart.

____ 30. Sectional views show interior features as object lines rather than hidden lines.

____ 31. Sectional views are needed when an object contains complex interior structures.

____ 32. Section lines are drawn to the same weight as object lines.

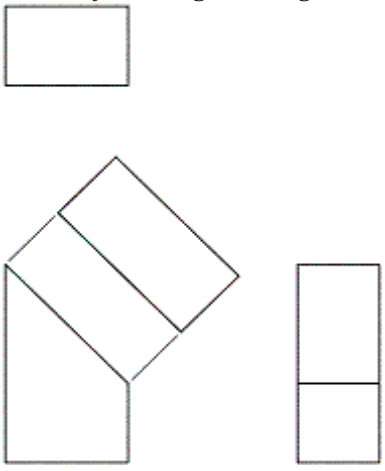
____ 33. In a half section, one-quarter of the object is theoretically removed to show the interior details.

____ 34. Auxiliary views show the true size of features inclined to the principal planes of projection.

____ 35. An inclined surface appears as an edge in two of the three normal orthographic views.

____ 36. An auxiliary view is projected perpendicular from a regular orthographic view.

Use the following drawing to answer the questions below.



____ 37. The inclined surface of the object is perpendicular to the frontal projection plane.

____ 38. The inclined surface of the object appears foreshortened in the front view.

____ 39. A front auxiliary view is projected in this drawing.

____ 40. An isometric view is drawn with two horizontal axes inclined at 45° and a vertical (straight) axis.

____ 41. The front view of an oblique drawing is parallel to the front projection plane.

____ 42. Placing the vanishing point below the object in a one-point perspective orients the view so that the viewer is looking "down."

____ 43. The front surface of a one-point perspective drawing is drawn at its true size.

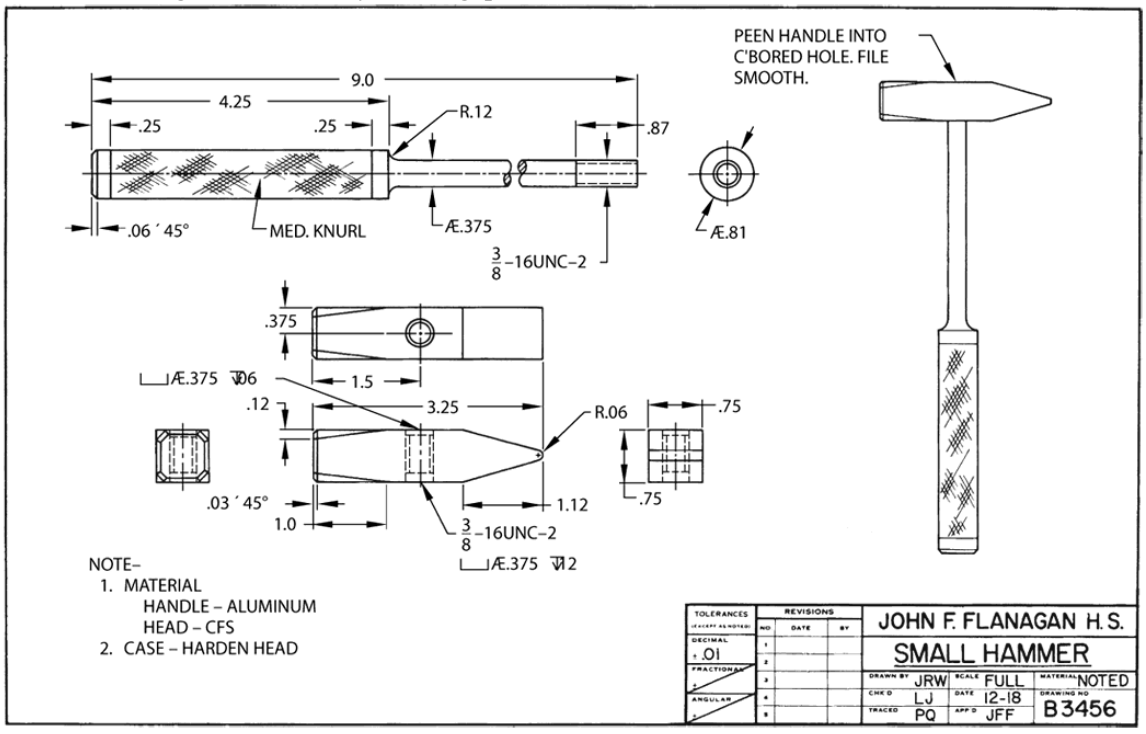
____ 44. In three-dimensional drawing applications, a cylinder is an example of a primitive object.

____ 45. Detail drawings are typically drawn in pictorial form.

____ 46. The purpose of a working drawing is to show the product to be manufactured and to establish the standards by which it must be manufactured.

____ 47. Development of working drawings may include the preparation of both orthographic and pictorial views.

Use the drawing to answer the following questions.



____ 48. The head of the tool is made from cold-finished steel.

____ 49. Industrial designers should have a knowledge of manufacturing processes.

____ 50. Most design problems have only one good solution.

____ 51. A professional map drafter is known as a cartographer.

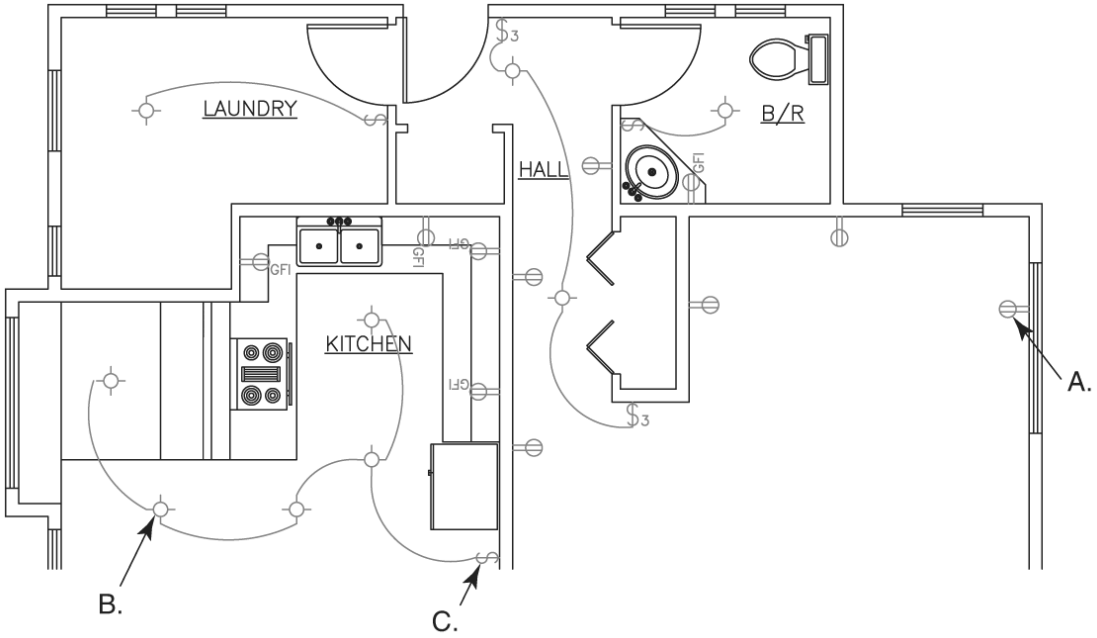
____ 52. Plot plans are typically drawn at a scale of 1″ = 1′-0″.

____ 53. City maps are used to show the layout of streets and lots in a given area.

____ 54. CAD software increases the time required to create drawings of circuit boards.

____ 55. Integrated circuits are manufactured for use on circuit boards.

Use the given drawing to answer the following questions.



____ 56. The type of drawing shown is a wiring diagram.

____ 57. The symbol indicated at A shows a light fixture.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. The primary function of a(n) ____ is to improve industrial product designs.
A. industrial designer
B. modelmaker
C. teacher
D. technical illustrator

____ 2. ____ produce physical designs of interior building spaces.
A. Industrial designers
B. Interior designers
C. Tool designers

D. Technical illustrators

____ 3. A(n) ____ is responsible for planning and designing structures.
A. architect
B. teacher
C. technical illustrator
D. tool designer

____ 4. A(n) ____ designs the cutting and holding devices used in manufacturing.
A. architect
B. interior designer
C. technical illustrator
D. tool designer

____ 5. A(n) ____ prepares drawings in pictorial form for industrial use.
A. interior designer
B. modelmaker
C. teacher
D. technical illustrator

____ 6. A drafting trainee ____.
A. redraws or repairs damaged drawings and makes simple detail drawings
B. prepares working drawings from specifications, sketches, and rough designs
C. supervises other drafters
D. All of the above.

____ 7. Engineers ____.
A. provide technical and managerial leadership in industry and government
B. are responsible for the design and development of new products
C. plan structures and highways
D. All of the above.

____ 8. The thin lines placed between extension lines to indicate a linear distance are ____ lines.
A. cutting-plane
B. dimension
C. object
D. section

____ 9. The centers of round objects are indicated using ____.
A. centerlines
B. hidden lines
C. object lines
D. section lines

____ 10. General classifications of materials are identified using ____.
A. centerlines
B. hidden lines
C. object lines
D. section lines

____ 11. Lines drawn as a series of dashes 1/8″ (.125″) in length with spaces 1/16″ (.06″) in length between the dashes are ____.
A. construction lines

B. dimension lines
C. extension lines
D. hidden lines

____ 12. Section lines are typically drawn inclined at ____.
A. 30°
B. 45°
C. 60°
D. 75°

____ 13. Cutting-plane lines are drawn to the same weight as ____.
A. centerlines
B. hidden lines
C. object lines
D. section lines

____ 14. An extension line typically begins ____ away from the edge or feature of the object being dimensioned.
A. 1/16″ (.06″)
B. 5/64″ (.08″)
C. 1/10″ (.1″)
D. 1/8″ (.125″)

____ 15. Which of the following tools should *not* be used to sketch lines?
A. Drawing pencil
B. Eraser
C. Graph paper
D. Scale

____ 16. A(n) ____ is sketched by first constructing a rectangle with dimensions equal to the major and minor axes of the object.
A. circle
B. ellipse
C. hexagon
D. octagon

____ 17. A(n) ____ is sketched by first constructing centerline axes and inclined lines at 30° and 60°.
A. circle
B. ellipse
C. hexagon
D. octagon

____ 18. ____ lines are very thin lines drawn approximately .012″ thick.
A. Construction
B. Cutting-plane
C. Dimension
D. Object

____ 19. ____ are drawn approximately twice as thick as hidden lines.
A. Centerlines
B. Object lines
C. Phantom lines
D. Section lines

____ 20. ____ lines are made up of a series of long dashes (3/4″ to 1-1/2″ or .75″ to 1.50″) and two short dashes (1/8″ or .125″).
A. Construction
B. Cutting-plane
C. Dimension
D. Hidden

____ 21. Which of the following statements is *not* true of object lines?
A. They should be drawn using an H or 2H drawing pencil.
B. They should be drawn very sharp.
C. They are drawn to the same line weight as centerlines.
D. They should be drawn approximately .024″ thick.

____ 22. ____ have alternating long and short dashes drawn through the perimeter of a circular object.
A. Centerlines
B. Extension lines
C. Object lines
D. Section lines

____ 23. On an architect's scale, each division on the 16 scale is equal to ____.
A. 1/2″
B. 1/4″
C. 1/8″
D. 1/16″

____ 24. Which of the following statements is *not* true in relation to drawing lines?
A. Lines must appear consistent in width from end to end.
B. The pencil should form approximately a 30° angle against the drawing edge as the line is drawn.
C. Lines should be "pushed" onto the paper, not "pulled."
D. The pencil should be rotated between the thumb and forefinger as the line is drawn.

____ 25. The lines making up the sides of a hexagon form ____ angles.
A. 30°
B. 60°
C. 90°
D. 120°

____ 26. A(n) ____ is a closed curve in the form of a symmetrical oval with four quadrants.
A. ellipse
B. octagon
C. rhomboid
D. trapezoid

____ 27. A line that forms a 90° angle with another line is ____.
A. concentric
B. parallel
C. perpendicular
D. tangent

____ 28. A regular ____ has five equal sides.
A. hexagon

B. octagon
C. pentagon
D. rhomboid

____ 29. A(n) ____ triangle has no equal sides or angles.
A. equilateral
B. isosceles
C. right
D. scalene

____ 30. CAD drawings are commonly output as hard copy with a ____.
A. digitizing tablet
B. drafting machine
C. monitor
D. plotter

____ 31. CAD drawings are made up of ____ objects.
A. bitmap
B. pixel
C. raster
D. vector

____ 32. A ____ is used to convert hard-copy images to bitmap form.
A. drafting machine
B. plotter
C. scanner
D. stylus

____ 33. Which of the following is *not* used to enter commands in a CAD program?
A. coordinate axis
B. digitizing tablet
C. keyboard
D. toolbar

____ 34. In the Cartesian coordinate system, the ____ axis is considered the horizontal axis.
A. W
B. X
C. Y
D. Z

____ 35. The absolute coordinate (2,-2) is located in the ____ quadrant of the XY drawing plane in the Cartesian coordinate system.
A. lower-left
B. lower-right
C. upper-left
D. upper-right

____ 36. Which of the following is a valid polar coordinate entry?
A. (3,6)
B. (5,0,3)
C. (@6,3)
D. (@3<30)

____ 37. A(n) ____ is an object setting used to control the visible display of objects.
A. attribute
B. layer
C. menu
D. template

____ 38. To draw a(n) ____, a center point, minor axis, and major axis must be specified.
A. chamfer
B. circle
C. ellipse
D. line

____ 39. Which of the following is *not* specified when drawing a polygon?
A. Center point
B. Circle radius
C. Mirror axis
D. Number of sides

____ 40. The ____ command is used to change the angular position of an object with respect to the current orientation.
A. **Copy**
B. **Move**
C. **Rotate**
D. **Scale**

____ 41. The ____ command is used to lengthen a line to meet an edge.
A. **Extend**
B. **Move**
C. **Scale**
D. **Trim**

____ 42. The ____ command is used to move the drawing across the display area without changing the magnification.
A. **Hide**
B. **Pan**
C. **Trim**
D. **Zoom**

____ 43. Drawing objects in a CAD program are ____ objects made up of lines and arcs defined with points in space.
A. raster
B. vector
C. pixel
D. bitmap

____ 44. Which CAD function allows you to align the cursor to points in an invisible grid?
A. The **Pan** command
B. The **Units** command
C. Snap
D. Orthogonal mode

____ 45. Text strings of information about a related block are known as ____.
A. attributes
B. arrays
C. layers
D. templates

____ 46. The **Fillet** command is used for ____.
A. drawing chamfers
B. drawing rounds
C. mirroring objects
D. scaling objects

____ 47. In orthographic projection, the ____ principal plane represents the projection of the top view of the object.
A. frontal
B. horizontal
C. profile
D. vertical

____ 48. ____ projection is the orthographic projection method most commonly used in the United States.
A. First-angle
B. Second-angle
C. Third-angle
D. Fourth-angle

____ 49. When locating views on a drawing, the top view should be placed ____ the front view.
A. above
B. below
C. to the left of
D. to the right of

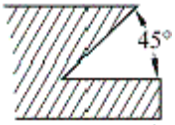
____ 50. When projecting views, depth distances may be projected to side views with a ____ projection angle or a compass.
A. 30°
B. 45°
C. 60°
D. 75°

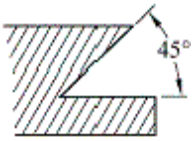
____ 51. Extension lines should begin ____ away from the object feature.
A. 1/32″
B. 1/16″
C. 1/8″
D. 1/4″

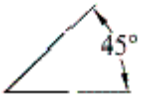
____ 52. Which of the following statements is true of leaders?
A. The arrowed portion is always drawn vertical or horizontal.
B. The leader shoulder should extend 1/16″ from the arrowed portion.
C. When a leader is located on the left side of a note, the shoulder connects to the beginning of the first line.
D. On diameter dimensions, the tip of the arrowed portion should touch the primary center point of the object.

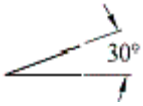
____ 53. Which of the following is *not* one of the fundamental rules of dimensioning?
A. Dimensions should be placed within object lines whenever possible.
B. Dimensions should be drawn parallel to the measuring direction.
C. Dimensions should be kept grouped together.
D. Size and location dimensions should be placed on the view that shows the true shape of the feature being dimensioned.

____ 54. ____ is a manufacturing operation in which a chamfered recess is cut at the end of a smaller hole and used to receive a fastener head.
A. Counterboring
B. Countersinking
C. Spotfacing
D. Turning

____ 55. Which of the following conventions should *not* be used to dimension angles?
A. 

B. 

C. 

D. 

____ 56. Dimension lines and extension lines are drawn to the same line weight as ____.
A. border lines
B. object lines
C. centerlines
D. cutting-plane lines

____ 57. When arranging dimensions on a drawing, ____ dimensions should be placed farthest from the view.
A. location
B. size
C. small
D. overall

____ 58. A ____ is a chamfered recess at the end of a smaller hole used to receive the head of a fastener.
A. countersink
B. counterbore
C. boss
D. spotface

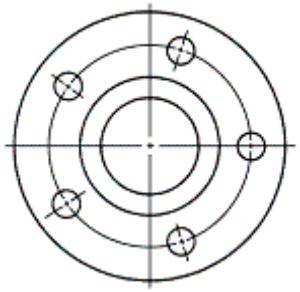
____ 59. Angular dimensions are expressed in ____.
A. decimal inches
B. fractional inches
C. millimeters
D. degrees

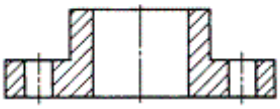
____ 60. General-purpose section lines are typically spaced ____ apart.
A. 1/8″
B. 1/4″
C. 1/2″
D. 3/4″

____ 61. A(n) ____ is developed by passing a "stepped" cutting plane through features that do not lie on the same plane.
A. full section
B. offset section
C. removed section
D. revolved section

____ 62. A(n) ____ is developed by cutting out a portion of a long, uniform object and sliding the ends together.
A. aligned section
B. conventional break
C. offset section
D. removed section

____ 63. The following drawing uses a(n) ____ section view to show interior details.





A. aligned
B. half
C. removed
D. revolved

____ 64. To show where an imaginary cut is made through an object to be sectioned, a(n) ____ line is used.
A. cutting-plane
B. object
C. phantom
D. section

____ 65. General-purpose section lines are usually drawn at ____ angles.
A. 15°
B. 30°
C. 45°
D. 60°

____ 66. A(n) ____ section is used to describe objects with irregular features by rotating the features that do not intersect the cutting plane into the same plane.
A. aligned
B. broken-out
C. outline

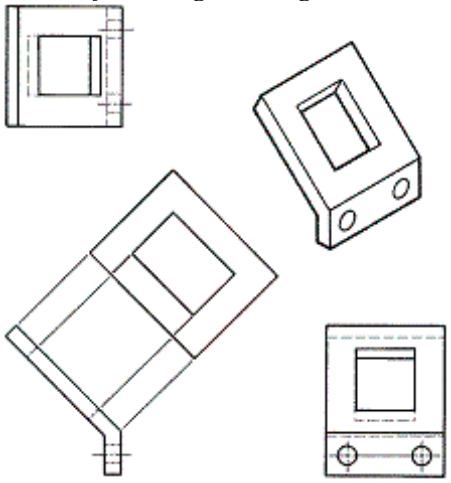
D. removed

____ 67. To project an auxiliary view from a surface inclined at 45° in a regular orthographic view, the auxiliary projection plane is drawn at ____.
A. 45°
B. 60°
C. 75°
D. 90°

____ 68. Which of the following statements is *not* true regarding auxiliary views?
A. A front auxiliary view is projected from a front orthographic view.
B. The conventional practice is to project only the inclined portion of an object in an auxiliary view.
C. Circular features are drawn as ellipses when projected to an auxiliary view.
D. A secondary auxiliary view is projected from a regular orthographic view.

____ 69. An auxiliary view is projected with construction lines at ____ to the inclined surface.
A. 45°
B. 60°
C. 75°
D. 90°

Use the following drawing to answer the questions below.



____ 70. Which type of auxiliary view is projected in the drawing?
A. Front auxiliary view.
B. Left-side auxiliary view.
C. Right-side auxiliary view.
D. Top auxiliary view.

____ 71. In which of the following views does the inclined surface of the object appear foreshortened?
A. Top and auxiliary views
B. Front and side views
C. Top and side views
D. Top and front views

____ 72. The inclined surface of the object appears in its true length and width in the ____ view.

A. auxiliary
B. front
C. side
D. top

____ 73. A cabinet oblique drawing has a depth axis drawn at ____ scale.
A. one-quarter
B. one-half
C. three-quarter
D. full

____ 74. Which of the following statements is *not* true in relation to dimensioning pictorial drawings?
A. Dimension lines are drawn parallel to the direction of measurement.
B. Dimensions on adjacent planes can use the same extension line.
C. Dimension numerals and letters may be unidirectional or parallel to the pictorial planes.
D. Dimensions should be given at a scaled size rather than full size.

____ 75. A(n) ____ drawing appears as if it is tilted 35°16′ toward the viewer.
A. isometric
B. cabinet oblique
C. cavalier oblique
D. perspective

____ 76. The ____ command is used to create 3D models from two-dimensional geometric shapes.
A. **Extrude**
B. **Render**
C. **Scale**
D. **Zoom**

____ 77. A(n) ____ drawing uses two 30° horizontal axes and a vertical axis to represent the dimensions of an object.
A. isometric
B. multiview
C. orthographic
D. section

____ 78. The depth axis lines in a cavalier oblique drawing are drawn at ____ scale.
A. 1/4
B. 1/2
C. 3/4
D. full

____ 79. The depth axis lines in a cabinet oblique drawing are drawn at ____ scale.
A. 1/4
B. 1/2
C. 3/4
D. full

____ 80. In an oblique drawing, the ____ surface of the object is parallel to the projection plane.
A. front
B. side
C. top
D. bottom

____ 81. Which of the following is true of dimensions in pictorial drawings?
A. They are placed on top of (within) the view.
B. They are placed in pictorial planes.
C. They are duplicated across views to help clarify the content.
D. They are drawn for hidden features.

____ 82. A two-point perspective drawing is also known as a(n) ____ perspective.
A. angular
B. horizontal
C. parallel
D. vertical

____ 83. Exploded assembly drawings are commonly drawn as ____ drawings.
A. isometric
B. multiview
C. oblique
D. perspective

____ 84. Maps used to provide navigational information for aeronautical and marine applications are typically called ____.
A. charts
B. location maps
C. topographic maps
D. vicinity maps

____ 85. A(n) ____ plan is a drawing that shows the property and boundary lines of a housing subdivision.
A. elevation
B. plat
C. plot
D. site

____ 86. A(n) ____ plan shows the site dimensions of a house and the exact location where it is to be situated on a lot.
A. elevation
B. plat
C. plot
D. section

____ 87. A ____ uses collected data to design and draw maps.
A. cartographer
B. contractor
C. mechanical drafter
D. surveyor

____ 88. A drawing of a lot on which a house is to be built is called a(n) ____ plan.
A. elevation
B. floor
C. location
D. plot

____ 89. Drawings of building lots are commonly drawn to a scale of ____.
A. 1″ = 1″
B. 1″ = 1′-0″
C. 1″ = 30′-0″

D. 1/4″ = 1′-0″

____ 90. Irregular lines showing differences in elevation on a map or drawing are called ____ lines.
A. contour
B. section
C. spatial
D. terrain

____ 91. ____ diagrams show the location of switches, outlets, and lighting on a residential plan drawing.
A. Block
B. Pictorial
C. Schematic
D. Wiring

____ 92. ____ diagrams use shapes such as squares and rectangles to explain the operation of an electronic device.
A. Block
B. Pictorial
C. Schematic
D. Wiring

____ 93. Symbols and lines on electrical drawings should be drawn to the same weight as ____ lines.
A. construction
B. dimension
C. hidden
D. object

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Answer Section

TRUE/FALSE

1. ANS: T PTS: 1
2. ANS: T PTS: 1
3. ANS: T PTS: 1
4. ANS: T PTS: 1
5. ANS: T PTS: 1
6. ANS: F PTS: 1
7. ANS: T PTS: 1
8. ANS: T PTS: 1
9. ANS: T PTS: 1
10. ANS: T PTS: 1
11. ANS: F PTS: 1
12. ANS: F PTS: 1
13. ANS: T PTS: 1
14. ANS: T PTS: 1
15. ANS: T PTS: 1
16. ANS: F PTS: 1
17. ANS: F PTS: 1
18. ANS: T PTS: 1
19. ANS: T PTS: 1
20. ANS: T PTS: 1
21. ANS: T PTS: 1
22. ANS: F PTS: 1
23. ANS: F PTS: 1
24. ANS: F PTS: 1
25. ANS: T PTS: 1
26. ANS: T PTS: 1
27. ANS: F PTS: 1
28. ANS: F PTS: 1
29. ANS: T PTS: 1
30. ANS: T PTS: 1
31. ANS: T PTS: 1
32. ANS: F PTS: 1
33. ANS: T PTS: 1
34. ANS: T PTS: 1
35. ANS: F PTS: 1
36. ANS: T PTS: 1
37. ANS: T PTS: 1
38. ANS: F PTS: 1
39. ANS: T PTS: 1
40. ANS: F PTS: 1
41. ANS: T PTS: 1

42. ANS: F PTS: 1
43. ANS: T PTS: 1
44. ANS: T PTS: 1
45. ANS: F PTS: 1
46. ANS: T PTS: 1
47. ANS: T PTS: 1
48. ANS: T PTS: 1
49. ANS: T PTS: 1
50. ANS: F PTS: 1
51. ANS: T PTS: 1
52. ANS: F PTS: 1
53. ANS: T PTS: 1
54. ANS: F PTS: 1
55. ANS: T PTS: 1
56. ANS: T PTS: 1
57. ANS: F PTS: 1

MULTIPLE CHOICE

1. ANS: A PTS: 1
2. ANS: B PTS: 1
3. ANS: A PTS: 1
4. ANS: D PTS: 1
5. ANS: D PTS: 1
6. ANS: A PTS: 1
7. ANS: D PTS: 1
8. ANS: B PTS: 1
9. ANS: A PTS: 1
10. ANS: D PTS: 1
11. ANS: D PTS: 1
12. ANS: B PTS: 1
13. ANS: C PTS: 1
14. ANS: A PTS: 1
15. ANS: D PTS: 1
16. ANS: B PTS: 1
17. ANS: C PTS: 1
18. ANS: A PTS: 1
19. ANS: B PTS: 1
20. ANS: B PTS: 1
21. ANS: C PTS: 1
22. ANS: A PTS: 1
23. ANS: D PTS: 1
24. ANS: C PTS: 1
25. ANS: B PTS: 1
26. ANS: A PTS: 1
27. ANS: C PTS: 1

28. ANS: C PTS: 1
29. ANS: D PTS: 1
30. ANS: D PTS: 1
31. ANS: D PTS: 1
32. ANS: C PTS: 1
33. ANS: A PTS: 1
34. ANS: B PTS: 1
35. ANS: B PTS: 1
36. ANS: D PTS: 1
37. ANS: B PTS: 1
38. ANS: C PTS: 1
39. ANS: C PTS: 1
40. ANS: C PTS: 1
41. ANS: A PTS: 1
42. ANS: B PTS: 1
43. ANS: B PTS: 1
44. ANS: C PTS: 1
45. ANS: A PTS: 1
46. ANS: B PTS: 1
47. ANS: B PTS: 1
48. ANS: C PTS: 1
49. ANS: A PTS: 1
50. ANS: B PTS: 1
51. ANS: B PTS: 1
52. ANS: C PTS: 1
53. ANS: A PTS: 1
54. ANS: B PTS: 1
55. ANS: A PTS: 1
56. ANS: C PTS: 1
57. ANS: D PTS: 1
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63. ANS: A PTS: 1
64. ANS: A PTS: 1
65. ANS: C PTS: 1
66. ANS: A PTS: 1
67. ANS: A PTS: 1
68. ANS: D PTS: 1
69. ANS: D PTS: 1
70. ANS: A PTS: 1
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73. ANS: B PTS: 1
74. ANS: D PTS: 1

75. ANS: A PTS: 1
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88. ANS: D PTS: 1
89. ANS: C PTS: 1
90. ANS: A PTS: 1
91. ANS: D PTS: 1
92. ANS: A PTS: 1
93. ANS: D PTS: 1