Printreading for Residential Construction

Chapter 1

1. What are the five types of working drawings?

2. What information is typically available on a plot plan?

3. What scale is typically used for a plot plan?

4. Which drawings show the shape, size, and relationship of rooms?

5. Which drawings are typically drawn first?

6. What are the types of elevation drawings?

7. How many elevation drawings are required to show the outside walls of a house?

8. What types of information may be found on interior elevation drawings?

9. Which drawing is a cutting plane through a portion of a house?

10. How is the scale determined for a detail drawing?

11. What type of information is typically found in the title block of a drawing?

12. Where did the name “Blueprint” originate?

13. What is the main advantage of electrostatic prints?

14. What happened to the original blueprints when they were exposed to light?

15. What color background and lines are typically found on diazo prints?

16. What are the two methods of developing diazo prints?

17. How are electrostatic prints made?

18. What is the main disadvantage of electrostatic prints?

19. What are some of the tools of old fashioned drafting?

20. What are the two most commonly used drafting tools?

21. What are the two types of dividers?
22. What is an “architect’s scale”?

23. What are hard pencil leads used for when drawing sketches?

24. What are the main advantages of Computer-Aided Design for drawings?

25. What are CAD input systems? (List some)

26. What are CAD output systems? (List some)

Chapter 2

1. What is sketching?

2. What type of lead is typically used for sketching?

3. How are portions of a sketch protected from erasing?

4. How is the length of a horizontal line indicated?

5. What is a geometric shape with a flat surface called?

6. What is a “sector” when referring to drawing a circle?

7. What is an isosceles triangle?

8. What is an equilateral triangle?

9. What is the term for a three-dimensional representation of an object?

10. What is the term for a pictorial drawing with all receding lines converging to vanishing points?

11. What is the angle for horizontal lines when constructing an isometric drawing?

12. How would a circle appear on an isometric drawing?

13. What are the most common objects shown on oblique drawings?

14. Which type of drawing shows each face of an object projected on a flat plane at 90 degrees to each other?

15. How many plane views are typically required to show all the details of most objects?

16. What is the most important single drawing in a set of plans?
17. How are hidden lines shown on orthographic projections?

18. What are the two rules for deciding what scale to use for a set of prints?

19. What scale is typically used for floor plans?

20. What scale is typically used for detail plans?

21. What is the length of a wall measuring 2 7/8” if the scale is ¼”=1’?

22. What is the length of a wall measuring 2 1/8” if the scale is 1/8”=1’?

23. What is the length of a wall measuring 1 3/16” if the scale is ¼”=1’?

24. What is the length of a cabinet measuring 1 7/8” if the scale is 1/2”=1’?

25. What is the height of a window measuring 2 7/8” if the scale is 1 1/2”=1’?

26. What is the length of a house measuring 5 5/8” if the scale is 1/8”=1”?

27. Is a tape measure as good as an architect’s scale ruler for getting dimensions from drawings? Why?

28. Who sets standards for dimensioning and tolerancing?

29. What are three methods of terminating dimensioning lines?

30. Where is the dimensioning measurement taken from for outside walls of a dwelling? (Inside of stud, outside of stud, outside of sheathing, or outside of finished wall)

31. Where are the dimensioning measurements taken for interior walls? (Stud face, center of stud, finish wall face)

32. Where are the dimensioning measurements taken for locating windows and doors on a drawing? (Near edge and far edge, center, etc.) What is preferred?

Chapter 3

1. What is a prime number?

2. What are a minuend and a subtrahend?

3. What is one method of checking a multiplication question for accuracy?
4. What is the term for the process of determining the number of times one number is contained in another?

5. What are the terms used to describe the resultant answer in a multiplication and division question?

6. What are two methods of stating smaller segments of whole numbers?

7. What must be done with fractions before they can be added or subtracted?

8. What is the proper procedure for multiplying two fractions?

9. What must be done with a mixed number before it can be multiplied by a fraction?

10. What is the value of ½ multiplied by 1/8?

11. What is the value of 1 2/3 multiplied by ¾?

12. What is the value of 3 1/8 multiplied by 1 ¼?

13. What is the rule for dividing fractions?

14. What is the value of 1 2/3 divided by 2/5?

15. What is the value of ¾ divided by 1 ½?

16. What does the symbol “*” represent when it separates two numbers?

17. What does the symbol “/” represent when it separates two numbers?

18. How is a fraction converted to a decimal number?

19. How are inches converted to a decimal number?

20. What is the decimal equivalent of 2/3”?

21. What is the accepted (rounded off) decimal foot value of 1/8”?

22. How many feet are in 1 meter?

23. How many pounds are in 1 kg?

24. What is the area of a room measuring 10’x12’?

25. What is the volume of a room measuring 10’x 12’x 8’?
Chapter 4

1. What is the main advantage of symbols and abbreviations used on working drawings?

2. What is the purpose of the letters added to electrical symbols?

3. What does the symbol S2 indicate on a working drawing?

4. What is an acronym?

5. When an abbreviated letter denotes several different meanings on symbols, how do you determine which one is indicated?

6. What are three abbreviations for a closet on a working drawing?

Chapter 5

1. What is the appropriate time to purchase a building permit?

2. When is it permitted to occupy a newly constructed residence?

3. Where is basic information typically found to draw a plot plan?

4. What is the term used to describe the divided portions of a township?

5. Which drawing typically shows the utilities and size of the house on a lot?

6. What drawing would include a point of beginning?

7. How is natural grade distinguished from finish grade on an elevation drawing?

8. What is indicated by closely spaced contour lines on a plot plan?

Chapter 6

1. What scale is typically used for floor plans?

2. Portions of a floor plan may be drawn to a different scale to allow for more detail. True or false?

3. Which plan is the result of an imaginary cutting plane taken through the house 5’ above each finish floor?
4. Where is the front of the house located on most floor plans?

5. What is a riser on a drawing of a set of stairs?

6. What is the term used to describe the process in CAD that allows architects to easily copy a floor plan for additional floors or trades?

7. Which drawings have little or no detailed information or dimensions but show overall construction concepts?

8. How are base cabinets and wall cabinets shown on a floor plan?

9. How many floor plans are required for a two-story house with a basement?

10. What is a footing?

11. What are three types of dormers?

12. What are two materials used to reinforce concrete?

13. What does “WWR” on a concrete floor indicate?

14. What is a panned ceiling?

15. What is indicated by a symbol on the outside of a residence with the letters “FP HB” nearby?

Chapter 7

1. What are three general bits of information shown on exterior elevation drawings?

2. What scale is typically used for exterior elevation drawings?

3. What are the four exterior elevation drawings for most houses?

4. Elevation drawings typically show all dimensions. True or false?

5. A scale of $\frac{1}{4}$”=1’ is what percentage of the actual building?

6. Are upper or lower case letters typically used for abbreviations?

7. What are some characteristics of a contemporary house design?

8. What are the six basic roof designs for construction?
9. How is the “fractional pitch” of a roof determined?

10. Detailed information on windows and doors is found on elevation drawings. True or false?

11. What is the purpose of dashed lines on a window in an elevation drawing?

12. What is the minimum thickness for solid-core exterior wooden doors?

13. What two elements typically make up the exterior finish information?

14. Vertical dimensions between floors on elevation drawings are taken from what point to what point?

15. What measurement is typically shown on drawings for doors and windows?

Chapter 8

1. Which drawing is made by passing a cutting plane vertically through a portion of a building?

2. What is the difference between sectional and detail drawings?

3. What type of drawing would typically show individual components in a wall or foundation?

4. What is the term used to describe a drawing that is made by passing a cutting plane through the shorter dimension of a house?

5. What are the three common types of residential construction?

6. What type of framing is assembled with a bottom plate, studs and two top plates one story at a time?

7. What is a “sill plate”?

8. What is the purpose of cross bridging between floor joists?

9. What type of framing is used when the studs extend from the sill plate to the double top plate?

10. What size planks are typically used for floors and roofs with post and beam construction?

11. What are “structural insulated panels”?
12. What is the purpose of weep holes in brick veneer construction?

13. How is the brick veneer secured to the wood frame construction in a typical building?

14. What is a wythe?

Chapter 9

1. What drawing is an elevation, section, or plan view drawn to a larger scale?

2. What are the three preferred scales for detail drawings?

3. What are the two basic types of dimensions?

4. What is the purpose of references?

5. What is the term used to describe an imaginary slice passing through an object?

6. How are different section details identified?

7. What room in a dwelling is most likely to need interior wall elevations? (Think about it.)

8. Which drawing typically shows more detail, floor plan or interior elevation?

9. What is a keyway in a footing?

10. When are detail drawings required for roof framing?

11. Typically, what is the only required information for the contractor when preparing a wall for the installation of windows?

12. How much is the rise in the panned ceiling on sheet 6?

13. What type of brick is typically used for the fire box in a fireplace?

14. What is the size of the wire reinforcement in the concrete floor of the basement?

15. How far does the ceramic tile hearth extend from the firebox opening?

16. What is the “R” rating of brick veneer walls?

Chapter 10

1. Which trade is likely to use more of the drawings than others?
2. What are the first points that must be established when doing concrete foundation work?

3. What is the most common thickness for residential foundation walls?

4. What is the purpose of double-head nails?

5. What must be added when slab-at-grade foundations are installed in cold climates?

6. How are butted joists fastened together?

7. How are lapped joists fastened together?

8. When are lower ends of bridging to be fastened?

9. What finish items are typically detailed in specifications?

10. What is the maximum slope for a ramp for people with physical disabilities?

11. What is the maximum height above the floor for a counter containing a sink to be ADA compliant?

12. What is a pattern of brick called?

13. Who publishes the National Electrical Code?

14. How often is the NEC updated?

15. What is indicated on a plot plan by a line consisting of long and short dashes?

16. According to the NEC, how many amps are to be calculated for general purpose receptacles?

17. Where is EMT not recommended as a wiring method?

18. How often must ENT be supported? (According to the NEC)

19. What are the maximum degrees for all bends in PVC conduit? (According to the NEC)

20. What is the minimum bending radius for armored cable? (According to the NEC)

21. What is the minimum distance between supports for NM or NMC cable? (According to the NEC)
22. What does the U stand for in USE cable?

23. How far must holes for wires be from the edge when drilled in wooden members?

24. Kitchen counter tops require a receptacle if they are over what length? (According to the NEC) (According to the CEC) They may be different.

25. What is the height range for installing receptacles and switches according to ANSI/ICC.

26. What structural consideration is very important to plumbers?

27. When is the rough-in plumbing done?

28. What are the main components of a plumbing system?

29. What is “potable” water?

30. What is the purpose of a “trap” in a plumbing system?

31. Where is information about the manufacturer and model for plumbing fixtures found?

32. Everything needed for the plumbing installation is found on the plumbing floor plan. True or false?

33. Which drawings would show connections to local water and sewer lines?

34. How are distinctions made between different types of piping on piping drawings?

35. Where are supply air registers typically placed in a room?

36. Where are return air registers typically placed in a room?

37. Which dimension is always given first when referring to rectangular ducts?

38. What style house would benefit from an extended plenum duct system?

39. What is the purpose of safety controls on a heating system?

40. What is the advantage of a two pipe system for in-slab hot water heating?

41. What are the two main types of electric radiant heating?

42. What is a geothermal heating system?
43. What three liquids are used for a geothermal system?

44. What are the three basic parts of an air conditioner?

45. What factor must be considered when installing a split HVAC system?

46. Which type of screws is typically used for sheet metal work?