



United Brotherhood of Carpenters and Joiners of America Local Union No. 22 San Francisco

All applications must be completed and returned to Local 22, 2085 Third Street, San Francisco, CA 94107 postmarked by June 27, 2014. No late applications will be considered.

There is no initiation fee for Carpenters Local 22.

Regular monthly membership dues are \$25.50

If you are interested or have any questions, please email us at info@local22.org or call us at 415.355.1322 or come by and visit us at 2085 Third Street (corner of 18th Street).

NOTICE OF EXAMINATION

THE TEST: You will be given a multiple choice test. Your score on this test will be used to determine your place on an eligible list. You must achieve a score of at least 70% to pass this test. The multiple-choice test may include questions on the use of carpentry tools, equipment, materials and hardware; plan reading and specifications; construction, including framing and details; arithmetical computations (in general math, fractions, decimals, percentages, measurement, measurement tools, area measure, and volume measure); safety/OSHA; and other related areas.

The Framing and Rough Carpentry (C-5) examination is divided into six major sections:

1. Structural Framing (40%)

- Load and span.
- Bracing
- Shear and diaphragm.
- Wind loads.
- Structural hardware.

2. General Framing (20%)

- Form work.
- Wood and metal framing.
- Weatherproofing.
- Siding, roofing, and flooring.
- Doors, windows, and stairs.
- Fences, decks, porches, and gazebos.
- Measurement
- Squaring and leveling.
- Hardware and fasteners.
- Materials, tools, and equipment.

3. Estimation, Plans & Specifications (15%)

- Estimation
- Blueprints, specifications and shop/field drawings.
- Three dimensional drawings.

4. Safety and Codes (10%)

- Cal/OSHA requirements.
- EPA and AQMD regulations.
- Asbestos and environmental hazards.
- CBC and related codes.
- ADA requirements.

5. Mathematics (10%)

- Business math and conversions.
- Algebra and geometry.

6. Related Trades (5%)

- Installation requirements (e.g., elevator access for mill-work).
- Coordinating trades (plumbing and electrical).

1. When ripping material with a table saw, which of the following procedures should be followed?

- a. Avoid using a push stick when feeding narrow strips into the saw.

- b. Cross cut narrow pieces of wood between the blade and the fence.
- c. Feed material into the saw in the same direction as the blade rotation.
- d. Avoid standing directly behind the saw.

2. According to the CBC, which seismic zones cover the State of California?

- a. 1 and 2a
- b. 2a and 2b
- c. 2a, 2b, and 3
- d. 3 and 4

3. Three primary factors determine the size and the type of rafter to use in construction. Two of these are the distance spanned and the weight supported. What is the third factor?

- a. the spacing of the rafters.
- b. the spacing of joists.
- c. the type of sheathing to be used.
- d. the height of the wall.

Math for the Trades

Carpenters must have a functional understanding of general math, fractions, decimals, measurement, measurement tools, area measure, and volume measure.

The United Brotherhood of Carpenters provides all of our Apprentices and Journeymen with FREE Math for the Trades instruction.

Apprentice Applicants are asked to complete a Math Evaluation to assist us in determining their math comprehension.

This page includes an **Apprentice Applicant Math Evaluation Study Guide**. It also includes a study guide for Apprentices and Journeymen taking the Construction Trades courses.

Please check back as we will be adding links to additional resources, e.g., websites, videos, etc. that you may find helpful in reviewing general math, fractions, decimals, percentages, measurement, measurement tools, area measure, and volume measure.

We would strongly encourage you to take some online courses or review basic mathematics, such as:

- Whole Number: [addition, subtraction, multiplication and division](#)
- [Fractions](#): defining, adding, subtracting, multiplying and dividing
- [Decimals](#): adding and subtracting, multiplying and dividing, converting to fractions and converting fractions to decimals
- [Percentages](#): calculating, adding, dividing, converting to decimal, converting decimals to percentages

Carpentry Practice Test

Take this free carpentry practice test to see how prepared you are for a carpentry licensing certification test.

1. Joist hangers are used for which of the following?

- a. Supporting joists against beams
- b. Keeping joists straight during delivery
- c. Inspection
- d. There is no such thing as a joist hanger.

2. The smallest mark on a tape measure is:

- a. Millimeter
- b. 1/16 inch
- c. 1/4 inch
- d. 1/2 inch

3. What type of hammer is commonly selected for trim work?

- a. Framing hatchet
- b. 28-ounce long handle waffle head
- c. 20-ounce long handle straight claw
- d. 16-ounce wood handle curved claw

4. What are plywood clips used for?

- a. Straightening floor sheathing
- b. Keeping plywood straight in stacks

- c. Supporting roof sheathing edges between the trusses
- d. There is no such thing as a plywood clip.

5. A contractor is to excavate a basement containing 58,500 cu. ft. She removes 3,950 cu. ft., then 9,325 cu. ft., then 6,581 cu. ft., and finally 4,873 cu. ft. How many cubic feet remain in the basement?

- a. 31,071 cu. ft.
- b. 33,771 cu. ft.
- c. 33,861 cu. ft.
- d. 34,131 cu. ft.

6. What is PL-400?

- a. Drill bit size
- b. Type of construction adhesive
- c. Number of teeth on a hacksaw
- d. Plywood specification

7. Which is not a rule for laying out stairs?

- a. The product obtained by multiplying one rise height by the tread width should be between 70 and 75 inches.
- b. The sum of two risers is always the same.
- c. The sum of one riser and one tread should be between 17 and 18 inches.
- d. The number of treads and risers is always the same.

8. Calculate 1/4 inch plus 1/4 inch.

- a. Too small to calculate
- b. 1/8 inch
- c. 1/2 inch
- d. 3/4 inch

9. A wood auger bit marked 10 will drill with what diameter?

- a. 1 inch
- b. 1/3 inch
- c. 5/8 inch
- d. 10/32 inch

10. The path a saw blade cuts in a piece of wood is called:

- a. Waste
- b. Kerf
- c. Clearance
- d. Set

11. When squaring up a large rectangular object, which method would be the least acceptable to use?

- a. 6,8,10 method
- b. Calculate a diagonal measurement

- c. Measure diagonally both ways
- d. Framing square

12. When nailing 2x6 inch joists, what nail should be used?

- a. 10 d
- b. 18 d
- c. 30 d
- d. 42 d

13. There are 808 four-penny nails in a pound. How many are there in 22 3/4 pounds?

- a. 17,776
- b. 18,180
- c. 18,382
- d. 18,584

14. How many pieces of lumber 1 1/2 inches wide will be needed to cover a 42-inch wide space?

- a. 24
- b. 26
- c. 28
- d. 30

15. How many 2x4 blocks 22 1/2 inches long can be cut from a 2x4 that is 8 feet long?

- a. 2
- b. 4
- c. 6
- d. 8

16. Subtract $3 \frac{15}{32}$ inches from $9 \frac{1}{16}$ inches.

- a. $5 \frac{19}{32}$ inches
- b. $5 \frac{15}{16}$ inches
- c. 6 inches
- d. $6 \frac{19}{32}$ inches

17. What is one-half of 23 feet and $11 \frac{9}{16}$ inches?

- a. 10 feet and $11 \frac{15}{16}$ inches
- b. 11 feet and $9 \frac{25}{32}$ inches
- c. 11 feet and 10 inches
- d. 11 feet and $11 \frac{25}{32}$ inches

18. Which number is greatest?

- a. .246
- b. .08
- c. .3
- d. .07

19. Add (15 feet and 6 $\frac{3}{4}$ inches) + (5 feet and 11 $\frac{5}{8}$ inches) + (11 feet and 5 $\frac{7}{16}$ inches) + (6 feet and 9 $\frac{3}{16}$ inches)

- a. 39 feet and 9 inches
- b. 40 feet
- c. 40 feet and 9 inches
- d. 42 feet and 6 inches

20. A lot measures 112 feet and 5 inches x 88 feet and 3 inches x 97 feet and 6 inches x 114 feet and 2 inches. What is the distance around the lot?

- a. 412 feet and 4 inches
- b. 412 feet and 10 inches
- c. 414 feet
- d. 420 feet

21. What is the perimeter of a square with sides 9 feet and 6 inches long?

- a. 36 feet and 2 inches
- b. 38 feet
- c. 38 feet and 6 inches
- d. 40 feet

22. Which is greater in inches: $\frac{9}{16}$, $\frac{5}{8}$, $\frac{3}{16}$, $\frac{3}{4}$, $\frac{47}{64}$ or $\frac{1}{2}$?

- a. $\frac{9}{16}$ inch
- b. $\frac{3}{4}$ inch
- c. $\frac{5}{8}$ inch
- d. $\frac{47}{64}$ inch

23. The area of a right triangle having legs 10 feet long is 50 square feet.

- True
- False

24. When using a circular saw, the best way to prevent kickback is to keep the blade sharp.

- True
- False

25. Subcontractors are required for work at a building site, and two have bid on the job. Subcontractor A will do the job in 16 hours at \$133.00/hour and subcontractor B will do the job in 14 hours at \$153.00/hour. Subcontractor A has the lower bid.

- True
- False

Also go to

http://www.nic.bc.ca/PDF_docs/departments/Math_Review_for_Carpenters.pdf