

ARIZONA REGISTRAR OF CONTRACTORS

R-37 PLUMBING, INCLUDING SOLAR (RESIDENTIAL)

SCOPE OF WORK

Installation and repair of water and gas piping systems, fire protection systems, and sewage treatment systems. Included are all fixtures, vents, and devices common to the industry, as well as solar applications. This scope includes all R-37R subclassifications.

Examination	# of Questions	Minimum Passing Score	Time Allowed
R-37	100	70%	240 Minutes
R-37 Solar	30	70%	75 Minutes

R-37

CONTENT OUTLINE

Subject Area	# of Items
Drainage Waste and Vents	16
Indirect Waste	4
Water Supply Systems	13
Backflow Prevention	5
Roof Drains and Storm Drainage Systems	5
Plumbing Fixtures (including water heaters and accessibility)	7
General Knowledge and General Regulations	10
Specialty Plumbing, Interceptors, and Traps	5
Isometric Analysis	5
Fuel Gas	10
Septic and Sewer	10
Fire Sprinklers	5
Excavation	5

REFERENCE LIST

To find reference materials, you may use the link provided or search for the material online via a search engine such as Google. You may also go to PSI's online store at www.psionlinestore.com.

The reference material listed below was used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge or general industry practices. **Except for Code books**, you can base your answers on later editions of references as they become available. For Code questions, the examinations will be based **only** on the edition of the Code book that is listed.

Candidates may use a silent, nonprinting, non-programmable calculator in the examination center.

The following reference material is allowed in the examination center:

Code of Federal Regulations - 29 CFR Part 1926 (OSHA), with latest available amendments, U.S. Government Printing Office, (866) 512-1800 or <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html> -OR-

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 3210 E Tropicana, Las Vegas, NV 89121, (800) 733-9267, www.psionlinestore.com (See order form at the end of the Candidate Information Bulletin.)

International Fuel Gas Code, 2018, International Code Council, (800) 786-4452, www.iccsafe.org

International Mechanical Code, 2018 Edition, International Code Council, (800) 786-4452, www.iccsafe.org

International Plumbing Code, 2018, International Code Council, (800) 786-4452, www.iccsafe.org

NFPA 13 - Installation of Sprinkler Systems, 2016, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org

NFPA 13D - Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, 2007 or 2013, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org

NFPA 13R - Sprinkler Systems for Residential Occupancies up to and Including Four Stories in Height, 2007 or 2013, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101, www.nfpa.org

On-site Wastewater Treatment Facility Provisions in Unified Water Quality Permit Rule, Arizona Administrative Code Title 18, Chapter 9, 2006, Arizona Department of Environmental Quality, 1110 West Washington Street, Phoenix, AZ 85007, www.azdeq.gov.

The following reference material is not allowed in the examination center:

Mathematics for Plumbers and Pipefitters, 2008 or 2013, Cengage Learning.

IPT's Pipe Trades Handbook, 1991, Robert A. Lee, IPT Publishing & Training, Ltd., pipefitter.com/store

Boiler Operator's Guide, 4th edition, 1997, Kohan, Anthony, McGraw-Hill Education

Arizona 811: Arizona Blue Stake, Inc., July 2010, 1-800-STAKEIT (782-5348), www.arizona811.com

Modern Hydronic Heating for Residential and Light Commercial Buildings, 2004 or 2012, Delmar Learning

Candidates are responsible for bringing their own references to the examination center. Reference materials may be highlighted, underlined, annotated and/or indexed prior to the examination session. However, references may not be written in during the examination session. Any candidate caught writing, highlighting, underlining and/or indexing in the references during the examination will be reported to the Arizona Registrar of Contractors. Furthermore, candidates are not permitted to bring in any additional papers (loose or attached) with their approved references. References may be tabbed/indexed with permanent tabs only. (permanent tabs are defined as tabs that would tear the page if removed). Temporary tabs, (defined as Post-It notes, or other tabs that may be removed without tearing the page) are not allowed and must be removed from the reference before the exam will begin. If you are downloading from the Internet, you may bring this reference into the testing center with you as long as it is bound. You can have it spiral bound or you may hole-punch it and put it in a binder.

R-37 Solar

CONTENT OUTLINE

Subject Area	# of Items
Pool Systems	1
Estimating and Sizing	2
Collectors	3
Controls	3
Open and Closed Loop Systems	5
Pipes and Materials	5
System Designs	5
Pumps and Storage Systems	6

REFERENCE LIST

The following reference material is allowed in the examination center:

International Plumbing Code, 2018 Edition, International Code Council, (800) 786-4452, shop.iccsafe.org

The following reference material is not allowed in the examination center:

Solar Water and Pool Heating Design and Installation Manual, 2006, Florida Solar Energy Center, 1679 Clearlake Road, Cocoa, FL 32922-5703, (321) 638-1015, www.nabcep.org/wp-content/uploads/2013/08/FSEC_Solar_Water_and_Pool_Heating_Manual.pdf

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