

Plumbing Program Standards Criticality Survey 2018

CONTENT STANDARD 1.0: INTRODUCTION TO THE PLUMBING PROFESSION				
Performance Standard 1.1: Introduction to the Plumbing Profession				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
1.1.1 Describe Idaho Plumbing Code and Administrative Rules requirements.	5	14	21	2.40
1.1.2 Identify the basic principles on which plumbing is based.	1	18	21	2.50
1.1.3 Identify and maintain licensing, certification, and industry credentialing requirements.	0	10	30	2.75
Answered				40
Skipped				0

CONTENT STANDARD 2.0: PLUMBING SAFETY				
Performance Standard 2.1: Plumbing Safety				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
2.1.1 Complete OSHA 10 Certification.	14	15	8	1.84
2.1.2 Identify common unsafe acts and conditions common in plumbing that cause accidents and how to handle these situations to make them safer.	7	14	18	2.28
2.1.3 Identify job site hazards that are work specific for plumbers.	6	15	18	2.31
2.1.4 Complete First Aid and CPR Certification.	12	21	6	1.85
2.1.5 Use appropriate fire extinguishers and other safety devices.	8	22	9	2.03
Answered				39
Skipped				1

CONTENT STANDARD 3.0: INTRODUCTION TO HAND TOOLS AND POWER TOOLS				
Performance Standard 3.1: Hand Tools				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
3.1.1 Identify the types of hand tools used in the plumbing profession.	2	16	20	2.47
3.1.2 Demonstrate proper use and care of basic hand tools.	2	16	20	2.47
3.1.3 Identify the types of Personal Protective Equipment (PPE) required for hand tool use.	5	17	16	2.29
Answered				38
Skipped				2

Performance Standard 3.2: Power Tools				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
3.2.1 Identify the types of power tools used in the plumbing profession.	2	23	13	2.29
3.2.2 Demonstrate proper use and care of basic power tools.	2	19	17	2.39
3.2.3 Identify the types of Personal Protective Equipment (PPE) required for power tool use.	5	16	16	2.30
Answered				38
Skipped				2

CONTENT STANDARD 4.0: FITTINGS, PIPE, AND VALVES				
Performance Standard 4.1: Fittings and Valves				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
4.1.1 Identify the proper fittings and/or valves for specific systems.	3	21	14	2.29
4.1.2 Apply the various fittings and valves by type, size, materials, and application.	3	18	17	2.37
Answered				38
Skipped				2

Performance Standard 4.2: Types of Pipe				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
4.2.1 Identify the common types of pipes.	1	18	14	2.39
4.2.2 Identify the proper pipes for specific systems.	3	14	20	2.46
Answered				38
Skipped				2

CONTENT STANDARD 5.0: INDUSTRY MATH				
Performance Standard 5.1: Basic Mathematics				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
5.1.1 Perform addition, subtraction, multiplication, and division calculations of whole numbers.	4	19	15	2.29
5.1.2 Perform addition, subtraction, multiplication, and division calculations of common fractions.	9	19	10	2.03
5.1.3 Perform addition, subtraction, multiplication, and division calculations of decimal fractions.	10	21	7	1.92
5.1.4 Perform ratio and proportion calculations.	19	16	3	1.58
5.1.5 Perform percent, percentage, and discount calculations.	18	18	2	1.58
5.1.6 Perform area calculations.	11	20	7	1.89
5.1.7 Perform volume calculations.	11	18	9	1.95
5.1.8 Solve basic equations.	8	21	9	2.03
5.1.9 Demonstrate the use of order of operations.	12	17	9	1.92
Answered				38
Skipped				2

Performance Standard 5.2: Applied Mathematics				
Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
5.2.1 Determine center-to-center and end-to-end lengths for parallel offsets.	7	19	12	2.13
5.2.2 Calculate the travel for a rolling offset.	14	18	6	1.79
5.2.3 Solve for end-to-end lengths of pipe.	5	16	17	2.32
5.2.4 Calculate area, water volumes, weights, and gallons for various geometric shapes.	14	18	6	1.79
5.2.5 Explain pressure measurement in terms of Pounds per Square Inch (PSI) and inches of mercury.	19	14	5	1.63
5.2.6 Perform angular, length, and converted temperature measure calculations.	26	9	3	1.39
5.2.7 Calculate material expansion and/or volume related to heat.	25	10	3	1.42
Answered				38
Skipped				2

CONTENT STANDARD 6.0: THE UNIFORM PLUMBING CODE (UPC)**Performance Standard 6.1: The Uniform Plumbing Code (UPC)**

Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
6.1.1 Identify proper code terminology.	2	15	18	2.46
6.1.2 Identify general plumbing requirements for hanging and securing piping.	2	10	24	2.61
6.1.3 Identify plumbing fixtures.	1	15	19	2.51
6.1.4 Perform water heater sizing, combustion air calculations, vent sizing, and installation.	6	16	14	2.22
6.1.5 Perform water pipe sizing calculations.	3	12	21	2.50
6.1.6 Explain when and what type of backflow prevention devices, assemblies, and methods are required.	4	17	15	2.31
6.1.7 Perform drain and waste pipe sizing calculations.	2	8	26	2.67
6.1.8 Perform indirect waste installation and usage.	3	16	17	2.39
6.1.9 Describe venting systems (e.g., horizontal, vertical wet venting).	2	13	21	2.53
6.1.10 Identify proper use of traps and interceptors.	2	16	18	2.44
6.1.11 Perform proper storm drain sizing and calculations.	15	16	5	1.72
6.1.12 Perform fuel gas sizing calculations.	9	13	14	2.14
6.1.13 Identify proper fire-stop installation.	12	16	8	1.89
6.1.14 Identify the proper use of gray water, reclaimed water, and rainwater systems.	15	15	6	1.75
6.1.15 Utilize UPC appendices and reference standards.	11	17	8	1.92
6.1.16 Apply IDAPA plumbing rules and statutes (Title 54).	2	20	20	2.33
Answered				36
Skipped				4

CONTENT STANDARD 7.0: CONSTRUCTION DOCUMENTS**Performance Standard 7.1: Isometric Drawings**

	Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
7.1.1	Identify various plumbing symbols and abbreviations.	5	23	8	2.08
7.1.2	Complete an isometric drawing with proper symbols.	12	18	6	1.83
7.1.3	Develop a materials list based on isometric drawings.	9	21	6	1.92
Answered					36
Skipped					4

Performance Standard 7.2: Plan Reading

	Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
7.2.1	Describe basic plumbing symbols, abbreviations, and specifications.	5	20	11	2.17
7.2.2	Explain how the specifications relate to the plan.	4	21	11	2.19
7.2.3	Identify the necessary requirements and locations to install the plumbing fixtures and plumbing appurtenances.	3	14	19	2.44
7.2.4	Describe the coordination of trades on the job site.	9	14	13	2.11
7.2.5	Identify site plan, floor plans, elevations, sectional views, details, and schedules.	4	18	14	2.28
7.2.6	Locate specific information on building plans.	3	20	13	2.28
Answered					36
Skipped					4

CONTENT STANDARD 8.0: ADA GUIDELINES**Performance Standard 8.1: ADA Guidelines**

	Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
8.1.1	Identify the necessary requirements according to ADA standards.	3	20	13	2.28
Answered					36
Skipped					4

CONTENT STANDARD 9.0: KNOWLEDGE OF RELATED INDUSTRIES**Performance Standard 9.1: Knowledge of Related Industries**

	Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
9.1.1	Explain how to use alternating-current meters and instruments in the pipe trades.	18	13	3	1.56
9.1.2	Apply basic building codes.	14	15	5	1.74
Answered					35
Skipped					5

CONTENT STANDARD 10.0: CUT AND JOIN PIPES**Performance Standard 10.1: Cut and Join Pipes**

	Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
10.1.1	Join different types of pipes including PVC, galvanized, steel, plastic, copper, and cast-iron pipes.	1	10	24	2.66
10.1.2	Measure, mark, and cut different types of pipes using various pipe cutters.	3	11	21	2.51
10.1.3	Thread a steel pipe with a power-driven vise stand or a pipe-threading machine.	9	12	14	2.14
Answered					35
Skipped					5

CONTENT STANDARD 11.0: MAINTENANCE AND REPAIR**Performance Standard 11.1: Maintenance and Repair**

	Answer Choices	Nice to Know	Need to Know	Critical to Know	Rating Average
11.1.1	Diagnose water heater problems (e.g., gas, electric, tankless).	12	16	7	1.86
11.1.2	Identify repairs for residential fixtures.	10	19	6	1.89
11.1.3	Identify repairs for commercial fixtures.	11	19	5	1.83
Answered					35
Skipped					5