2020 Official Application Announcement

The Loyd E. Williams
Pipe Trades Training Center
780 Commercial Street · San Jose · California · 95112
(408) 453-6330
www.pipetradetraining.org

Step 1: Submit your application online

Applications for Apprenticeship will be available online only for Plumbing, Steamfitting-Pipefitting, and Refrigeration & Air Conditioning Mechanical Service at www.pipetradetraining.org from January 6, 2020 through 12:00 p.m. on February 13th, 2020. Paper applications will no longer be accepted.

Step 2: Submit your supporting documents in person

Supporting documents must be submitted in person on the following dates and times at the Training Center Office:

- February 3rd – 6th, 2020 (Monday – Thursday from 9:00am to 4:00pm)
- February 10th – 13th, 2020 (Monday – Thursday from 9:00am to 4:00pm)

Supporting Documents:
The following documents (include 1 extra copy of each) must be submitted in person by the applicant:

1) Paper copy of email confirming you applied online
2) Original high school diploma*, or GED, or official transcripts
3) Valid state issued driver's license or identification card, or U.S. passport
4) High school seniors must provide letter of recommendation from their high school indicating they are on track to graduate by June of 2020
5) All records must be presented and/or officially transcribed to English

*Diplomas will be verified; online diplomas will not be accepted

Step 3: Take the Entrance Exam at the Training Center

Qualified applicants will be scheduled to take the Entrance Examination on April 4th, 2020 at the Training Center. High school seniors anticipating graduation by June of 2020 will be allowed to take the Entrance Exam, however results will not be given until proof of graduation is provided, no later than June 30, 2020.

Hourly Wage Rate:
Earn while you learn. Apprentice starting wage is $29.10 for on the job training. Tuition is free!

Characteristics of the Trade:
Apprentices will be required to be in possession of a valid Driver’s License and maintain a safe driving record. Apprentices shall be under supervision of a qualified journeyman at all times. The trade requires physical effort on the part of the apprentice to do climbing, crawling, pulling, lifting, crouching and working in cramped quarters. Mechanical ability and finger dexterity are very essential. Depending on the job, the work may be performed either indoors or outdoors, with a majority of the work outdoors in semi-sheltered or unfinished buildings or in deep ditches and on high scaffolds. Seasonal work subject to weather and economic conditions. Apprentices will be required to perform the essential functions of the trade.

Minimum Requirements:
1. Age: Must be at least 17 years of age to apply. Qualified applicants who are 17 years old may take the exam but will not be dispatched to work until they reach their 18th birthday.
Minimum Requirements Continued:

2. Physical: Applicant must be of such physical condition as not to place him/herself or their future co-worker in jeopardy. No physical examination is required, however the applicant must be able to perform the physical requirements/essential functions of the Trade.

3. Other: Applicant may be required to pass a drug/alcohol test prior to being dispatched to an employer.

Length of Apprenticeship:
The length of apprenticeship for this trade is five (5) years of paid on-the-job training which includes five (5) years of unpaid night school classes which is typically two nights per week.

All qualified applicants who pass the Entrance Exam will be placed on a waiting list. The waiting list is valid for up to 3 years for the Plumbing and Steamfitting-Pipefitting trades – applicants are called off the waiting list to be dispatched. The waiting list is valid for up to 2 years for the HVACR trade and applicants must solicit work from a UA Local 393 signatory contractor. No individual will be allowed to take the Entrance Exam more than three (3) times.

The selection of apprentices will be made on the basis of qualifications alone, without regard to religion, creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status of the person discriminated against.

The Pipe Trades Training Center is committed to complying fully with the Americans with Disabilities Act (ADA) and ensuring equal opportunity for qualified persons with disabilities. The Pipe Trades Training Center will provide reasonable accommodation to the known disabilities of any student, if such accommodation is required in order for the student to participate in the program and the accommodation would not cause undue hardship. We comply with all applicable state and federal regulations regarding the accommodation of individuals with special needs.

DESCRIPTION OF OCCUPATIONS

PLUMBING
The Plumber protects the health and safety of the community by providing pure water to residential, commercial and industrial buildings for drinking, cooking, washing, cleaning, manufacturing or personal use, and to remove wastewater after it has served its purpose.

STEAMFITTING-PIPEFITTING
The Steamfitter protects our environment by properly installing piping and equipment for complex heating/air conditioning and special industrial piping systems such as semiconductor, biotechnology and power generation.

REFRIGERATION & AIR CONDITIONING MECHANICAL SERVICE:
The Refrigeration/Air Conditioning Service Mechanic is responsible for the service, repair, installation, and retrofit of all types of refrigeration equipment, from the smallest air conditioning systems to the air conditioning and refrigeration units used in hospitals, skyscrapers, research and development laboratories, supermarkets and other complex installations.

The purpose of the Loyd E. Williams Pipe Trades Training Center is to develop and maintain a highly skilled workforce by providing ongoing training opportunities.
Below is a list of areas you are encouraged to study for the math portion of the entrance exam.

- **Whole numbers**: addition, subtraction, multiplication, and division
- **Fractions**: addition, subtraction, division, and multiplication, converting improper to proper fractions, reducing
- **Percents**: converting to/from decimals or fractions, ratios, proportions
- Know how to read a tape measure
- **Geometry**: square root, diameter, area, perimeter

### Sample Questions

The following sample questions will not appear on the test. They are an example of the type of questions that might appear on the test. Calculators are **not** allowed during the entrance exam!

1. If your pay is $52.00 a month, how much will you earn in a year?

2. Your grades on 5 tests were 80%, 90%, 70%, 60% and 50%. What is the average of your 5 grades?

3. A dealer bought 3 loads of coal weighing 6,242 lbs., 28,394 lbs. and 143,686 lbs. How much did he buy in all?

4. It takes 5 lbs. of cement to cover 10 square feet. How many lbs. of cement will be needed to cover a rectangular area 25 ft. by 10 ft.?

5. Two machinists operating the same lathe, work 10 hours each on a day shift and on a night shift, respectively. One man turns out 400 pieces an hour, the other 600 pieces an hour. What will be the difference in their output at the end of 30 days?

6. If it takes 5 hours to do \( \frac{2}{3} \) of a job, how long will it take to complete the job?

Find the decimal equivalent to the nearest thousandths of the following:

7. \( \frac{3}{4} \)

8. \( \frac{28}{32} \)

9. \( \frac{56}{64} \)

10. \( \frac{31}{32} \)

11. \( \frac{7}{64} \)
12. Multiply .214 by .303
13. Multiply .014 by .0064
14. Find 12 \(\frac{1}{2}\) % of 96 men.
15. Find \(\frac{1}{2}\) of 1% of 190 tons.
16. 225 is 25% of what amount?
17. 120 is what percent of 240?
18. A truck carrying 6,750 lbs. of lead weighed 9,000 lbs. What percent of the total weight was due to the weight of the truck?
19. One customer received a 25% discount on a $300 bill. The second customer received an 8% discount on a $300 bill. The third customer received a 5% discount on a $300 bill. What was the total amount discounted to the three customers?
20. A plumber sells 100 sets of bathroom fixtures at $165.00 per set. At 16% what would his commission be?
21. A loss of $13.50 on a washing machine represents 15% loss on the selling price. What is the selling price?
22. Find the square root of 2937.44 by the arithmetic method.
23. Find the volume of a rectangular solid 20 ft. wide, 28 ft. long and 16 ft. high.
24. Find the area of a circle that has a radius of 12 inches.
25. A company marched 48 miles in 5 days. The first day they marched 12 miles, the second day 9 miles, the third day 7 miles, the fourth day 9 miles. How many miles did they march the last day?
26. If an automobile travels 450 yards in 15 seconds, how many feet does it go in 1/3 of a second?
27. How many tiles 9 inches square will be necessary to floor a room measuring 35 feet by 20 feet? (Round off to nearest tile)
28. Add the following numbers: 4,585,285 plus 792 plus 73,214.
29. 620.75 divided by .25 equals
30. A 3" pipe has an inside diameter of 3.067" and an outside diameter of 3.5". What is the thickness of the wall?

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<th>Answers:</th>
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<td>11. .109</td>
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<td>2. 70%</td>
<td>12. .064842</td>
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<td>3. 178.322 lbs. total</td>
<td>13. .0000896</td>
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<tr>
<td>4. 125 lbs = x</td>
<td>14. 12 men</td>
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<td></td>
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<tr>
<td>5. 60,000 pieces</td>
<td>15. .95 tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. 7.5 hours = 1 job</td>
<td>16. 000 = ?</td>
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<tr>
<td>7. .750</td>
<td>17. 50%</td>
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<td>8. .875</td>
<td>18. 25%</td>
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<tr>
<td>9. .875</td>
<td>19. $114.00</td>
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<tr>
<td>10. .969</td>
<td>20. $2,640.00</td>
<td></td>
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<td>21. $90.00</td>
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<tr>
<td>22. 54.198</td>
<td></td>
<td></td>
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<tr>
<td>23. 8,960 cubic ft.</td>
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<tr>
<td>24. 452,3904 sq. in.</td>
<td></td>
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<tr>
<td>25. 11 mi.</td>
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<tr>
<td>26. 30 ft.</td>
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<tr>
<td>27. 1,244 tiles</td>
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<td>28. 4,659.291</td>
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<tr>
<td>29. 2,483</td>
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<td></td>
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<tr>
<td>30. .2165&quot; (1)-wall thickness</td>
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DIRECTIONS

Find the space for Mechanical Reasoning on your answer document. You are to mark all of your answers on your answer document. Do not write in this test booklet.

In this test, you are to read each question carefully, look at the picture or pictures, and choose which one of the three answers, A, B, or C, is the best answer. Then mark the space on your answer document for the answer you have chosen.

Look at Sample A.

SAMPLE A

Which baseball will fly higher when the bat hits it?
(If no difference, mark C.)

Sample A shows two pictures that look similar. However, one detail is different: picture A shows the bat hitting the bottom of the baseball, and picture B shows the bat hitting the top of the baseball.

Ball A will fly higher because the bat is hitting the ball from below. Circle A for Sample A has been filled in on your answer document.
Look at Sample B.

Sample B also shows two pictures that are similar except for one detail: picture A shows a wagon with the handle down, and picture B shows a wagon with the handle up.

The answer is C. Both wagons can move in the direction shown because the handle position has no effect when the wagons move backwards. Fill in circle C for Sample B on your answer document.

Remember, if the question relates to two or more pictures, assume that the pictures are exactly the same except for the one detail that is shown to be different. Before you answer the question, look at each picture carefully and notice the one detail that is different.

If you have difficulty with a particular question, leave it and do the ones you find easier. Then, if you have time, go back to the questions you have skipped on this test only. Do not go on to the next test. Stop and wait for further directions.
SUGGESTED STUDY MATERIALS FOR THE MATH AND MECHANICAL REASONING TESTS

Please choose one math and one mechanical reasoning book to assist you in studying for the entrance exam. All books should be available to order online through Amazon or your local bookstore.

**MATH:**

1. **Practical Math Success in 20 Minutes a Day, 5th Ed.**  
   Author: LearningExpress LLC  
   Publisher: LearningExpress LLC  
   ISBN: 157685891X

2. **CliffsNotes Basic Math and Pre-Algebra Practice Pack, 2nd Ed.**  
   Author: Jonathan White  
   Publisher: CliffsNotes  
   ISBN: 0470533498

3. **Schaum’s Outline of Review of Elementary Mathematics, 2nd Ed.**  
   Author: Barrett Rich  
   Publisher: McGraw-Hill  
   ISBN: 007176254X

4. **The Humongous Book of Basic Math & Pre-Algebra Problems**  
   Author: W. Michael Kelley  
   Publisher: ALPHA  
   ISBN: 1615640835

5. **Basic Essentials of Math: Books 1&2**  
   Author: James T. Shea  
   Publisher: Steck-Vaughn  
   ISBN: 0811446689 (Book 1)  
   0811446697 (Book 2)

**MECHANICAL REASONING:**

1. **Master the Mechanical Aptitude and Spatial Relations Test, 7th Ed.**  
   Author: Peterson’s  
   Publisher: Peterson’s  
   ISBN: 076892863X

2. **Barron’s Mechanical Aptitude and Spatial Relations Test, 3rd Ed.**  
   Author: Dr. Joel Wiesen  
   Publisher: Barron’s  
   ISBN: 1438005709

3. **Mechanical, Spatial & Abstract Reasoning**  
   Author: Craig MacKellar  
   Publisher: Vivid Publishing  
   ISBN: 1925209369

4. **Master the ASVAB Basics, 1st Ed.**  
   Author: Peterson’s  
   Publisher: Peterson’s  
   ISBN: 076892829X
Plumbers, Steamfitters & Refrigeration Fitters U.A. Local 393

Effective July 1, 2019 through June 30, 2020

Basic Apprentice

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<th>Period</th>
<th>Basic *Taxable Wages</th>
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*Taxable Rates may vary depending on additional Part B Pension Contribution & Health & Welfare Extended Reserve Contribution

Fringes

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