MATH REVIEW FOR PLUMBING APPRENTICES

Level One Plumbing students should use this pre-test as an indicator of their current math skills. If you have problems completing any part of this test you should purchase the review book *Pre-Apprentice Training*: *A Test Preparation Manual for the Skilled Trades* by Jack Martin and Mary Serich (ISBN# 0964953013), available at the NIC bookstore in Campbell River and review any problem areas prior to your level one training.

Do not use a calculator for questions 1-13

1. Add the following numbers, 14, 108, 1027, 6, 339 Ans._____

2. Add the following numbers, 1.06, 113.94, 0.642, 2.009 Ans._____

3. Subtract 1026 from 2003 Ans._____

4. Subtract 56.078 from 87.64 Ans._____

5. Multiply 43 by 7 Ans._____

6. Multiply 1137 by 56 Ans._____

7. Multiply 11.007 by 108.2 Ans._____

8. Divide 1064 by 8 Ans._____

9. Divide 109.86 by 10.3 Ans._____

10. Add the following fractions, 1/4 + 1/8 + 3/16 + ½ Ans._____

11. Multiply the following fractions 3/7 by 5/9 by ½ Ans._____

12. Divide the following fractions 1/4 by ½ Ans._____

13. Divide 3/16 by 1/8 Ans._____

14. A right angle triangle contains one angle of 46°; calculate the size of the other small angle.

Ans._____

15. Convert 5/8 to its decimal equivalent, round your answer to three decimal places.

Ans._____

16. The number of millimeters in a meter is _____ Ans._____

17. One imperial gallon is equal to how many liters _____ Ans._____

18. A plumber cuts three sections of pipe from a 12’ length of ABS pipe, the lengths of the sections are 33 3/8”, 56 5/8” and 39 7/8”. What is left over from the full length, if the saw cut is 1/8” wide?

Ans._____

19. What is the radius of a circle having a diameter of 1.06 meters? Answer in millimeters

Ans._____

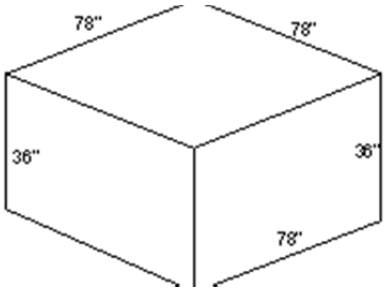
20. What is the circumference of a circle having a diameter of 12 feet? Ans._____

21. What is the area of a circle having a diameter of 4.5 feet? Ans._____

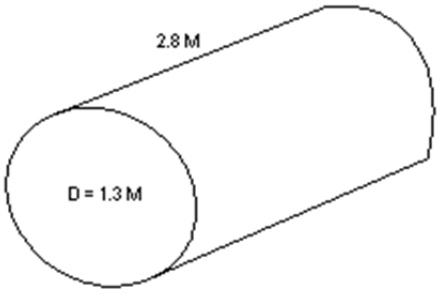
22. What the area of a right angle triangle having a base dimension of 3 feet and a height of 4 feet.

Ans._____

23. Calculate the surface area of this enclosed box. Answer in square inches Ans._____



24. Calculate the volume of this cylinder. Answer in Cubic metre Ans._____



25. What is 12% of 63? Ans._____

26. 17 is what percent of 26 Ans._____

27. 12.9 is 15% of what number Ans._____

28. An item sells for $63.59. What is the total cost for that item after 7% GST and 6% PST have been applied?

Ans._____

29. Find the square of 11. Ans._____

30. Find the cube of 5. Ans._____

31. Find the square root of 49. Ans._____

32. Find the cube root 216. Ans._____

33. Write 16% as a decimal number and a fraction. (reduce to lowest terms) Ans._____

34. Convert 1,000,000 to scientific notation. Ans._____

35. Convert 0.00001 to scientific notation Ans._____

36. Solve this equation Ans._____

$$\sqrt{16} + (9 + 16)^2 =$$

Answer Key

1. 1494
2. 117.651
3. 977
4. 31.56
5. 301
6. 63672
7. 1190.96
8. 133
9. 10.666
10. 17/16 or 1-1/16
11. 15/126 or 5/42
12. ½
13. 1-1/2
14. 44 degrees
15. 0.625
16. 1000
17. 4.54
18. 13 ¾”
19. 530 mm
20. 37.68 feet
21. 15.9 square feet
22. 6 square feet
23. 23 400
24. 3.718 cubic metres (or if 3.14 is used for Π the answer is closer to 3.715)
25. 7.56
26. 65%
27. 86
28. $71.86
29. 121
30. 125
31. 7
32. 216
33. 0.16 and 4/25

34. 10 ^6
35. 1^-5
36. 629