Foundation and Pre-Apprenticeship

Math & English Comprehension Test

Congratulations on applying for one of the trades ELTT or Pre-Apprenticeship programs at OC. Math might be used in your program to calculate rafters, measure parts, or to calculate volumes or areas. There will be many reading assignments and exams that will require you to use your reading comprehension skills. Math and English skills like any other skill can become weak if they are not used regularly. However, it is important to have solid Math and English skills before starting your program. Prior to writing the Trades entrance exams you may find it useful to refresh your skills.

If you find that you are not able to complete any of the questions, perhaps a textbook from your local library might help. Also, www.math.com provides a good review of math concepts. Upgrading courses are also available through the Adult Basic Education department at OC.

Pre-Entrance Trades Test - English

Example Questions

A - These type of questions test your understanding.

1. A person who moves to this country from another country to live is a / an:

    a) Immigrant
    b) Traveler
    c) Itinerant
    d) Ignorant

2. Botany is the study of:

    a) Boats
    b) Plants
    c) Buildings
    d) Horticulture

**B - For the next section of the English test, you will be required to read text, and then answer questions on it. There are around 10 different text examples, each with a few questions. ** *The way to prepare for these types of questions is to practice reading text, and understanding the information given. Read newspaper articles, advertisements and Poems.*

Example

Legend has it that a 14th Century Taoist monk created this ancient martial art, while watching the battle between a crane and a snake in a dance to the death.

"Tai Chi", which means " Grand Ultimate Fist", was taught secretly by certain families, and was not available to the general public for hundreds of years.

Today, touted as an excellent activity for people of any age with neurological impairments, the slow-moving, meditative dance gracefully and gently exercises limbs, Muscles, joints, tendons, bones and, on another level, the soul. It helps make motion more liquid, and teaches inner self-discipline. Arms open gracefully and legs gain strength because of prolonged "rooted" positions. The benefits include lower blood pressure, stress reduction, improved muscle tone, and circulation. Several years ago, in a Tai Chi study conducted by Emory University (May '96; Journal of American Geriatrics Society), balance problems and falls – common problems for people with MS – were significantly reduced by a whopping 47.5 percent with a group of 128.

1. Why does Tai Chi help to build leg strength?

   a) Because it is a meditative dance
   b) Because it teaches inner self discipline
   c) Because one stays in prolonged positions
   d) Because it improves circulation

2. Tai Chi is supposedly good for people who have Multiple Sclerosis, and other neurological conditions, but what age should they be to practice.
   a) Any age
   b) 14th Century
   c) 47.5
   d) over 21

Reading Answer Key: 1) C 2) A

Pre-Entrance Trades Test - Math

Example Questions - Answer Key at end of exam

All the Math questions have multiple choice answers. If the answer does not appear as a choice, you may choose **NG** – not given.

1. 4 X 6 =
   a) 64
   b) 24
   c) 6 ¼
   d) –4
   e) NG

2. 42 +23
   a) 19
   b) 29
   c) 56
   d) 64
   e) **NG**

There are several types of math problems on the tests including whole numbers, fractions, decimals, ratio and proportion, percent, roots and powers, algebra and finally circumference, area and volume.

I. WHOLE NUMBERS
1. 7589 + 654 + 2694 + 7501 =
2. 4500 – 786 =
3. 895 x 64 =
4. 7895 ÷ 56 =
5. Is the sum of 4659 and 1458 greater than the difference between 45698 and 34891
   a) yes   b) no

II. FRACTIONS (answers as fractions)

6. 16 3/4 + 19 3/5 =

7. 12 1/3 – 10 ¼

8. 4 1/2 ÷ 2 ¼

9. Which of the following fractions is the smallest?

   a) 3/4

   b) 1/2

   c) 7/16

   d) 17/32

III. DECIMALS

10. 15.6 x 0.032 =

11. 59.65 ÷ 7.4 =

12. 15 + 4.45 + 0.8 + 446.4 =

13. Write 0.564 as a common fraction

14. Express 6 3/8 as a decimal number

IV. RATIO AND PROPORTION

15. If N/16 = 3/4 , N =

16. If a 4 metre high round water tank filled to the 4 metre level holds 20 kL of water, how many kL of water would the tank hold filled to the 3 metre level?

17. A particular machine has a 4.3" diameter pulley that turns at 1725 RPM; how fast does another pulley, 2.78" in diameter, turn if they are connected by a drive belt (round off to the nearest whole number)?

V. PERCENT

18. 15% of $35.60 =

19. What percent of 160 is 8?

20. Write 15 ¾% as a decimal.

21. Express 1/2 % as a fraction.

22. If a person's wage was increased by 15% and the old rate was $12.00 per hour, how much would now be earned for 8 hours of work?

VI. ROOTS AND POWERS

23. $0.6^2 =$

24. $\sqrt{625}$

25. Which of the following numbers is the largest?

    a) $\sqrt{900}$

    b) 6^2

    c) 3^3

    d) 2^4

VII. ALGEBRA

26. If $32 = 7N - 3$, then N =

27. If $D = F/E$, then F =

28. If $2X/4 + 3 = 7$, then X =

29. If $5/9 (F-32^0) = C$, Calculate C when $F = 68^0$

30. A machinist needs to use two shims with a combined thickness of 0.084. One shim is to be three times as thick as the other. What are the thickness of the shims?

Math Answer Key:

I. WHOLE NUMBERS

1. 18,438

2. 3,714

3. 57,280

4. 140 and 55 remainder

5. b) no

II. FRACTIONS

6. 36 7/20

7. 2 1/12

8. 2

9. g) 7/16

III. DECIMALS

10. 0.499

11. 8.06

12. 466.65

13. 141/250

14. 6.375

IV. RATIO AND PROPORTION

15. N = 12

16. 15 kL

17. 2668 RPM

V. PERCENT

18. 5.34

19. 5%

20. 0.1575

21. 5/1000

22. $110.40

VI. ROOTS AND POWERS

23. .36

24. 25

25. b) 62 = 36

VII. ALGEBRA

26. N = 5

27. F = DE

28. X = 8

29. C = 20

30. 0.021 and 0.063