Brief Introduction to RAI (Reading and Arithmetic) Testing

By law, vocational students entering the Canadian Fire Alarm Technology Program must prove high school graduation or equivalent, or take a test to prove reading and math skills at the Grade 10-11 level.

The test we use is a government-approved standard test called **RAI.** We are told that it will tell us if prospective students can do:

- Arithmetic up to a "Grade 10 level";
- Reading up to "Grade 10.5".

These tests are normally administered by special appointment at our office. There is no time limit but most people take well under an hour for each test. You will have as long as you need. You will have a quiet space in which to do the test and a Health and Safety Management College representative will be there to give you instructions, answer questions and collect your test.

You will be provided with some scratch paper and a pencil or pen. You may not use a calculator.

The Reading test has 72 questions on:

- Picture/Word Association
- Word Decoding
- Phrase Comprehension
- Sentence Comprehension
- Paragraph Comprehension I
- Paragraph Comprehension II

The Arithmetic test has 70 questions about:

- Addition and Subtraction
- Multiplication and Division
- Fractions
- Decimals and Percentages
- Square Roots and Powers
- Geometry and Word Problems

There are some sample questions at the end of this document.

If you want to practice in advance…

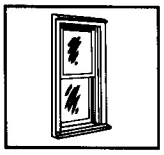
Help is available to most Ontarians at no cost through Adult Learning organizations. Google "Literacy", or visit your Employment Resource Centre or library for help finding someone in your area.

You might also try **self-study**. We recommend the reading and arithmetic sections of a book called *The Complete Canadian GED-Preparation Handbook*, by Steck and Vaughan, which costs about $26 and is available from many public libraries. If math is the main thing you want to practice, some people have found the phone app IXL to be effective. It's very inexpensive and teaches math in a game-like way.

1. 

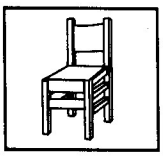
This is a . . . .1.

[A] hair
[B] hammer
[C] hamper
[D] halter

2. 

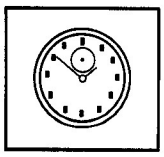
This is a . . . .2.

[A] ceiling
[B] floor
[C] window
[D] door

3. 

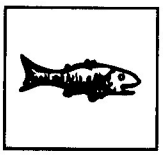
This is a . . . .3.

[A] chair
[B] chalk
[C] cheese
[D] cloud

4. 

This is a . . . .4.

[A] shoe
[B] cup
[C] clock
[D] sock

5. 

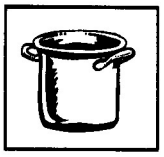
This is a . . . .5.

[A] fish
[B] frog
[C] fruit
[D] flute

6. 

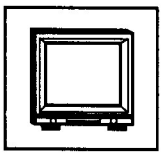
This is a . . . .6.

[A] toolbelt
[B] telescope
[C] toothbrush
[D] torpedo

7. 

This is a . . . .7.

[A] pot
[B] spoon
[C] can
[D] chair

8. 

This is a . . . .8.

[A] telephone
[B] television
[C] telegraph
[D] tank

9. 

This is a . . . .9.

[A] bicycle
[B] bird
[C] fly
[D] squirrel

10. 

This is a . . . .10.

[A] book
[B] boot
[C] board
[D] boat

11. People swim in

[A] salt
[B] water
[C] air
[D] soil

12. The sun rises

[A] in the morning
[B] in the spring
[C] in the evening
[D] often

13. A horse

[A] swims
[B] sails
[C] flies
[D] gallops

14. People use their noses to

[A] smell
[B] see
[C] touch
[D] hear

15. An iron is used on

[A] food
[B] flowers
[C] carpets
[D] clothes

16. A fireman uses a

[A] computer
[B] rake
[C] hose
[D] brush

17. Trains run on

[A] roads
[B] rails
[C] runways
[D] ramps

18. Boiling water makes

[A] smoke
[B] suds
[C] soap
[D] steam

19. A porcupine protects itself with

[A] spines
[B] spray
[C] singing
[D] sliding

20. Beaches are covered with

[A] air
[B] wood
[C] sand
[D] fire

41. The sports car had a powerful engine which enabled it to accelerate quickly.
THIS SENTENCE MEANS THE SAME AS:

[A] Although it could not accelerate quickly, the car had a powerful engine.
[B] A powerful engine can be found in every sports car.
[C] To accelerate quickly, a sports car does not need a powerful engine.
[D] Because of its powerful engine, the sports car had quick acceleration.

42. Although he went to buy a cookbook, the man bought a mystery novel at the bookstore.
THIS SENTENCE MEANS THE SAME AS:

[A] The man went to the bookstore and bought a cookbook.
[B] The man went to buy a cookbook and bought the bookstore.
[C] At the bookstore, the man bought a mystery novel instead of a cookbook.
[D] At the bookstore, the man bought a cookbook instead of a mystery novel.

43. The puffer fish will inhale water and inflate itself to appear larger to its enemies.
THIS SENTENCE MEANS THE SAME AS:

[A] In order to appear larger, the puffer fish inflates itself with water.
[B] In order to appear larger, the enemies of the puffer fish will inhale water to inflate themselves.
[C] The puffer fish has no large enemies due to its ability to inflate itself.
[D] The puffer fish inflates its enemies with water to protect itself.

44. As the boy walked down the street, his little brother walked behind him.
THIS SENTENCE MEANS THE SAME AS:

[A] The boy followed his little brother down the street.
[B] The boy's little brother walked behind him down the street.
[C] The boy and his little brother walked slowly down the street.
[D] As they walked down the street, the brothers walked together.

45. The workers carefully installed the plumbing, painted the walls, and laid down the carpeting, respectively.
THIS SENTENCE MEANS THE SAME AS:

[A] The workers installed the plumbing, painted the walls, and laid down the carpeting with respect.
[B] The plumbing installation, painting of the walls, and carpet laying were done in that order.
[C] Only the plumbing was installed in a careful manner.
[D] The plumbing, painting, and carpet laying were done at the same time.

46. The large painting was framed in gold, while the small painting was framed in blue with gold trim.
THIS SENTENCE MEANS THE SAME AS:

[A] Both the large and small paintings were framed at the same time.
[B] While the large painting was framed in gold, the small painting was still being framed .
[C] The large and small paintings were framed in gold.
[D] The small and large paintings were framed in blue with gold trim and gold respectively.

47. All of the students had to line up, starting with the first graders.
THIS SENTENCE MEANS THE SAME AS:

[A] Everyone should line up, followed by the first graders.
[B] The first graders line up first, followed by all other students.
[C] All of the students should line up.
[D] All of the first graders and other students should line up.

In this section, read the paragraphs carefully. Following them are some questions about what you have read. Answer each question by putting an X in the box in front of your choice.

The growth of industry in America during the early 1800s required labor as well as capital. From colonial times, labor had been scarce in America. At the beginning of the nineteenth century, ninety percent of all Americans still lived and worked on farms. City workers were few; many of them were skilled craftsmen who owned and managed their own shops. Unskilled labor was found in longshoremen and door-to-door handymen, but there was no sizable pool of labor to draw upon.

In the response to the needs of industry, a considerable class of wage earners finally began to form. Its member came mostly from the smaller, less productive farms of the east coast (those farms least able to compete with the more fertile fields in the west) and later from European immigrants.

In the textile mills, two different methods of hiring labor were used. One of these brought whole families into the mills. Father, mother, and children, even those no more than four and five years of age, worked together to produce cloth. The second method of hiring, called the Waltham or Lowell system, recruited young women in their late teens and early twenties. These unmarried women went from farms to the factories for a few years and returned, with their savings, to settle down as housewives. They did not form part of the permanent working class.

GO ON TO THE NEXT PAGE.

Add:

1. $\begin{array}{r} 7 \\ +\ 8 \\ \hline \end{array}$

[A] 9
[B] 10
[C] 14
[D] 15
[E] 16

2. $\begin{array}{r} 16 \\ +\ 23 \\ \hline \end{array}$

[A] 26
[B] 40
[C] 39
[D] 15
[E] 51

3. $\begin{array}{r} 37 \\ +\ 64 \\ \hline \end{array}$

[A] 81
[B] 96
[C] 110
[D] 91
[E] 101

4. $\begin{array}{r} 39 \\ 46 \\ +\ 53 \\ \hline \end{array}$

[A] 135
[B] 137
[C] 138
[D] 139
[E] 148

5. $\begin{array}{r} 682 \\ +\ 309 \\ \hline \end{array}$

[A] 934
[B] 989
[C] 891
[D] 991
[E] 801

6. $\begin{array}{r} 694 \\ 58 \\ +\ 496 \\ \hline \end{array}$

[A] 1,248
[B] 1,148
[C] 1,156
[D] 1,256
[E] 1,146

7. $\begin{array}{r} 566 \\ 114 \\ +\ 739 \\ \hline \end{array}$

[A] 1,519
[B] 1,419
[C] 1,539
[D] 1,429
[E] 1,329

Subtract:

8. $\begin{array}{r} 19 \\ -\ 3 \\ \hline \end{array}$

[A] 14
[B] 15
[C] 16
[D] 17
[E] 18

9. $\begin{array}{r} 47 \\ -\ 17 \\ \hline \end{array}$

[A] 35
[B] 50
[C] 40
[D] 20
[E] 30

10. $\begin{array}{r} 62 \\ -\ 44 \\ \hline \end{array}$

[A] 18
[B] 19
[C] 28
[D] 27
[E] 31

11. $\begin{array}{r} 567 \\ -\ 78 \\ \hline \end{array}$

[A] 428
[B] 379
[C] 389
[D] 489
[E] 498

12. $\begin{array}{r} 976 \\ -\ 449 \\ \hline \end{array}$

[A] 627
[B] 527
[C] 572
[D] 537
[E] 637

13. $\begin{array}{r} 5{,}015 \\ -\ 337 \\ \hline \end{array}$

[A] 4,679
[B] 4,687
[C] 4,678
[D] 5,678
[E] 5,687

14. $\begin{array}{r} 7{,}615 \\ -6{,}766 \\ \hline \end{array}$

[A] 794
[B] 859
[C] 759
[D] 749
[E] 849

Add:

40. $\begin{array}{r} 1.2 \\ +\ 4.9 \\ \hline \end{array}$

[A] 6.1
[B] 7.1
[C] 8.1
[D] 5.1
[E] 6.3

41. $\begin{array}{r} 20.32 \\ 1.2 \\ +\ 164.801 \\ \hline \end{array}$

[A] 109.123
[B] 196.231
[C] 186.321
[D] 186.231
[E] 176.231

Subtract:

42. $\begin{array}{r} 46.74 \\ -\ 9.92 \\ \hline \end{array}$

[A] 43.82
[B] 34.28
[C] 35.82
[D] 36.82
[E] 37.28

43. $\begin{array}{r} 19.7 \\ -\ 7.132 \\ \hline \end{array}$

[A] 12.658
[B] 13.685
[C] 10.568
[D] 12.568
[E] 11.658

Multiply:

44. $\begin{array}{r} 33.6 \\ \times\ .4 \\ \hline \end{array}$

[A] 4.413
[B] 1.344
[C] 134.4
[D] 44.13
[E] 13.44

45. $\begin{array}{r} .4 \\ \times\ .08 \\ \hline \end{array}$

[A] .32
[B] .032
[C] 3.2
[D] .0032
[E] 32

Divide:

46. $12.624 \div .002$

[A] 6312
[B] 6132
[C] 631.2
[D] 63.12
[E] 6321

47. $24 \div 1.2$

[A] 2000
[B] 200
[C] .2
[D] 20
[E] 2.0

Solve:

48. 25% changed to a decimal is:

[A] .025
[B] .50
[C] .25
[D] .0025
[E] 250

49. 500% changed to a decimal is:

[A] .05
[B] 500
[C] 5.01
[D] 50.0
[E] 5

50. 2% of \$190 =

[A] 4.1
[B] 3.9
[C] 3.8
[D] 3.7
[E] 4.0

51. 109% of 50 =

[A] 53.5
[B] 54.5
[C] 52.5
[D] 50.0
[E] 50.5

52. $3\frac{1}{2}\%$ of \$1000 =

[A] 350
[B] .035
[C] .35
[D] 35
[E] 3.5

53. 6 is what % of 18?

[A] 50%
[B] 75%
[C] 25%
[D] 10%
[E] $33\frac{1}{3}\%$

54. 120 is what % of 80?

[A] 175%
[B] 75%
[C] 150%
[D] 100%
[E] 125%