THE READING COMPREHENSION TEST

The final goal of reading instruction is comprehension of written material. The Reading Comprehension sub-test assesses reading comprehension with three types of reading material. Textual content is similar to that found in non-fiction and general information materials. Recreational content includes material read for enjoyment, including fiction, humour, literary criticism, and poetry. Functional content is the type of material encountered in everyday life, eg. directions, forms, advertising and labels. Test items are constructed to measure literal, inferential, and critical levels of comprehension. **The sample questions below reflect the format of test items, but not the degree of difficulty of the questions on the test.**

SAMPLE:

TALL TALES

Light from the candles bounced off the dark windows and made strange shadows on the walls. After hearing Uncle Sal's stories, we all sat nervously, listening for creaking footsteps and squeaking doors. Leo was the first to speak.

"You don't really believe all those stories about the old Potter place, do you, Uncle Sal?"

"I don't know," Uncle Sal said slowly, "no one has seen Mr. Potter in town for the last five years. Some say he hasn't set foot out of the house."

A. What time of day is it in the story?

a) Morning
b) Noon
c) Afternoon
d) Evening — Correct answer is "d"

B. What kind of stories did Uncle Sal tell?

f) Peaceful
g) Scary
h) Sad
j) Funny — Correct answer is "g"

THE ENGLISH SKILLS SUBTEST

The English Skills sub-test reflects the current emphasis in language instruction on the development of sound written communication skills that form the groundwork for writing fluency. It assesses your knowledge of punctuation and capitalization, as well as your ability to apply grammatical concepts and to recognize correct and effective structure and writing style. **The sample questions below reflect the format of test items, but not the degree of difficulty of the questions on the test.**

SAMPLES: Read each sentence. Decide which word or group of words belongs in the blank.

1) He is a student in _____.
   a) high school
   b) High school
   c) High School
   d) high School — Correct answer is "a"

2) My brother carried the boxes into the _____ unpacked them.
   a) house I
   b) house; I
   c) house, I
   d) house: I — Correct answer is "b"

3) The wind _____ through the trees.
   a) rustles
   b) are rustling
   c) do rustle
   d) rustle — Correct answer is "a"

For each question, read all four groups of works. One group of words forms a correct, clear sentence. Each of the other choices is incorrect in one of these ways:

1) It does not form a complete sentence.
2) It forms two sentences that are incorrectly run together.
3) It has confusing or unnecessary wording.
4) It does not express what the writer intended.
5) It does not express ideas well.

For each question, decide which sentence is written clearly and correctly.

4) a) You will receive a complimentary free gift at no charge.
   b) Paul walked into the adjacent building next door.
   c) Karen mailed the package today.
   d) Joseph himself was there live and in person. — Correct answer is "c"

5) a) She read the paragraph, explained it, and sat down.
b) June felt surprised, worried and anger.
c) Watching a play is more interesting than to watch a movie.
d) The room is warm, comfortable, and has good lights.

Correct answer is “a”

6) a) Flying over the house, Nancy heard a helicopter.
b) Full of energy, the house was cleaned in an hour.
c) I called to ask you to wait for me on the telephone.
d) My brother George just started high school. Correct answer is “d”

For each question, read the sentences in the box. Then choose the answer that best combines these sentences without changing their meaning.

Ed went to the shoe store. It is at the mall.

7) a) Ed went at the mall to the shoe store.
b) Ed’s shoe store is at the mall.
c) Ed went to the shoe store at the mall.
d) To the shoe store at the mall went End. Correct answer is “c”

MATHEMATICS SKILLS ASSESSMENT

OVERVIEW

The Conestoga College Math Skills Assessment has practical value for you and for us. Experience has shown that a student needs a certain level of skills in mathematics to succeed in Conestoga College programs. Therefore, we have designed the Math Skills Assessment so that you, and we, may be certain you have the skills suitable to your program of study.

A sample assessment is included in this packet. In content, it parallels the actual Math Skills Assessment you will write at the College and covers subject material through the grade 12 level.

WHAT TO EXPECT

The Conestoga College Math Skills Assessment has 100 questions – 4 questions for each of the 25 different math skills. The test is multiple choice. You will be required to choose the best answer to a question from several choices without the use of a calculator.

Introduction and instructions	15 minutes
Math test	120 minutes

The test begins at 10:45 a.m. The sample assessment is your best preparation. By making sure that you can do each question before coming to write the assessment at the College, you will be well prepared. The College supplies all materials. We do not allow the use of calculators, dictionaries or learning aids.

IMPORTANT: PLEASE NOTE

It is recommended that all applicants complete the entire Math Skills Assessment, that is all 100 questions. Your overall score on the test is important.

Some College programs require only partial test results to determine your level of readiness in mathematics.

Any of our Engineering Technology/Technician Programs (except Woodworking), General Arts & Science – Technology Option, Technology Stream, and Aviation	**Questions 1-100**
Any of our Business programs and Training & Development Programs	**Questions 1-88**
Certificate Programs, Woodworking, Health Sciences Programs, General Arts & Science – Certificate and Health Option, Trades Programs	**Questions 1-72**

SAMPLE MATH SKILLS ASSESSMENT

Without the use of a calculator, perform the following operations, as indicated. Always state answers in the lowest form.

Fundamentals

1. 216 + 64 + 1092 =

2. 318 – 95 =

3. 6 x 12 x 343 =

4. How much would it cost to cover a floor 8 m x 6 m with carpet that costs $13 per square metre?

Fractions I

5. Find the lowest common denominator of $\frac{1}{3}, \frac{1}{7}, \frac{1}{2}$

6. Reduce $\frac{24}{56}$ to lowest terms

7. List the prime factors of 216

8. Evaluate $\frac{2}{0}$

Fractions II

9. $\frac{3}{4} + \frac{7}{8} =$

10. $\frac{11}{2} - \frac{2}{3} =$

11. $\frac{63}{8} \times \frac{3}{4} =$

12. If 60 2/3 litres of gasoline are added to a tank that already contains 5 ½ litres, what is the total amount of gasoline in the tank?

Fractions III

13. $\frac{7}{8} \times 1\frac{2}{3} \times \frac{24}{5} =$

14. $\frac{2}{3} \div \frac{5}{8} =$

15. $(1\ ¾) \div (3\frac{5}{8}) =$

16. How many blocks which are 2/3 metres in length must be laid end to end to make a row 66 metres long?

Order of Operations:

17. $12 + 12 \div 6 + 4 =$

18. $36 \div 12 \times 6 - 4 =$

19. $(18 - 9) \div (20 \times 6) =$

20. $15 + 5 \div 5 \times 15 =$

Exponents I:

21. Evaluate $10^3 \times 10^4 =$

22. Evaluate $2^2 \div 2^7 =$

23. Evaluate $-(7^2)(-4)^2 =$

24. Evaluate $(7 - 4)^2 =$

Decimals

25. $0.653 + 1.09 =$

26. $45.75 \times 1.20 =$

27. $15.75 \div 0.25 =$

28. Write as a decimal "one thousand twenty-two and eighty-three hundredths."

Metric Conversions:

29. 456 mm to m =

30. 1500 m^2 to km^2 =

31. 36 km^2 to mm^2 =

32. 125 mm^3 to m^3 =

Fractions-Decimals-Percents:

33. Write 2/3 as a percent.

34. Write 12 ½% as a decimal.

35. Write 0.125 as a fraction.

36. 42.5 is what percent of 170?

Signed Numbers:

37. -12 + 20 – (-12) =

38. (-6) (2) ÷ (-12) (6) =

39. –(-1) + (1) ÷ [-(-1)] =

40. Which of the following would represent the lower temperature?
(45°) (-24°) (51°) (-17°) (0°)

Scientific Notation:

41. Express 4.95 x 10^{-3} in ordinary notation.

42. Express 1.75 x 10^4 in ordinary notation.

43. Express 0.000875 in scientific notation.

44. Express 9250000 in scientific notation

Exponents II:

45. Simplify $2A^2 (2A)^2$

46. Simplify $(4B^3)^2$

47. Simplify $12C^2 \div (CD^0)$

48. Simplify $5E^5 \div (5E)^4$

Simplification:

49. $\frac{5AB}{C^2} \div \frac{A^3C}{B} =$

50. $2[7 – (-4 + 2) - 1] =$

51. $(D – A/D) \div (2D/A) =$

52. $\frac{2A}{3} - \frac{4A}{5} + \frac{3A}{4} =$

Substitution:
Given A = 3, B = -1, C = -2, D = 0, E = 0

53. $A(-B + l/C) =$

54. $A^2 (BC)^3 + D/C =$

55. $A - B^2 (C^3/A) =$

56. $AEC^3 \div (A^2B^3D) =$

Expand by removing Brackets:

57. $(2A + 3) (A – 2) =$

58. $7(AB) (A^2 – B) =$

59. $(4E – 3)^2 =$

60. $(6F – 7) (-1 – F) =$

Equations:

61. If $3G = 24$ $G =$

62. If $4H + 7 = 23$ $H =$

63. If $5J - 6 = 2J + 12$ $J =$

64. If $\frac{K}{3} = \frac{15}{105}$ $K =$

Formula Rearrangement:

65. $V = \frac{D}{T}$ $T =$

66. $A = (V - U) \div T$ $V =$

67. $V^2 = U^2 + 2AD$ $U =$

68. $D = \frac{1}{2} AT^2$ $T =$

Word Problems:

69. Three times a number plus five is one hundred twenty-five. Find the number.

70. Seven times one third of a number, minus four equals ten. Find the number.

71. A collection of dimes and quarters totals $12.55. If there are three more dimes than quarters, how many dimes and quarters are there?

72. Adding two years to the age of a boy would make him a quarter of his father's age. Five years ago his father was one year less than ten times his son's age. Determine the age of the boy and his father.

Systems of Equations, Solve:

73. $4A - 3B = 9$, $A + B = 4$ $A =$ $B =$

74. $3C - 12D = -5$ $4C + 6D = -3$ $C =$ $D =$

75. $E + F = -1$ $2E + 3F = 0$ $E =$ $F =$

76. $6G - 4H = 9$ $5G + 3H = -2$ $G =$ $H =$

Graphing:

77. In Figure 1, which point is indicated by the co-ordinates (-2,3)?

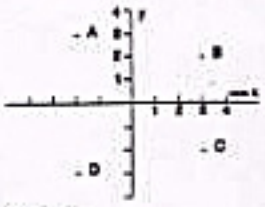

fig. 1

78. In Figure 2, what are the co-ordinates of the point where the line crosses the "Y" axis?

79. In Figure 2, what is the slope of the line?

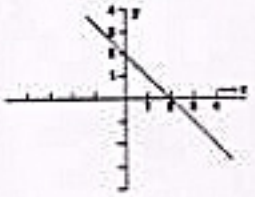

fig. 2

80. In Figure 3, what are the co-ordinates of the point where the line crosses the "X" axis?

fig. 3

Radicals:

81. $\sqrt{48}$

82. $\sqrt{0.0001}$

83. $\sqrt{X^2Y^3}$

84. $\sqrt{\frac{16}{5A^3}}$

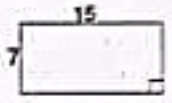

fig. 4

Simplification by Factoring:

85. $[(B^2-4)(A\div 7)] \div [(B-2)(2A\div 14)] =$

86. $(D^2-5D-14) \div (D^2-3D-10) =$

87. $(4F^2-1) \div (4F^2+8F+3) =$

88. $(3H^4+6H^2-9) \div (4H^4-4) =$

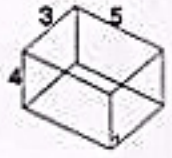

fig. 5

Geometry: (Take $\pi = \frac{22}{7}$

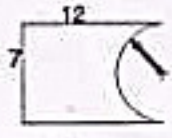

fig. 6

89. What is the area of Figure 4?

90. What is the volume of Figure 5?

91. What is the perimeter of Figure 6?

92. What is the surface of Figure 7?

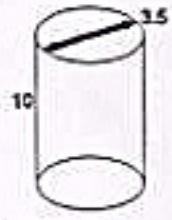

fig. 7

Angles:

93. How many degree is 2 π radians?

94. What is the complementary angle of 18°?

95. What is the equivalent positive angel of -235°?

96. What is the supplementary angle of 105°?

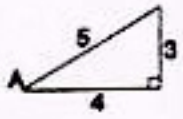

fig. **8**

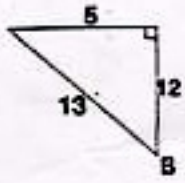

fig. **9**

Trigonometry:

97. In Figure 8, what is the value of SIN(A)?

98. In Figure 8, what is the value of COS(A)?

99. In Figure 9, what is the value of TAN(B)?

100. In Figure 10, what is the value of side "C"?

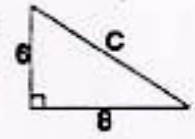

fig. **10**

ANSWERS:

1. 1372
2. 223
3. 24696
4. $624
5. 42
6. 3/7
7. 3x3x3x2x2x2
8. Undefined
9. 1 5/8
10. 4 5/6
11. 5 29/32
12. 66 1/6
13. 7
14. 1 1/15
15. 14/29
16. 99
17. 18
18. 14
19. 3/40
20. 30
21. 10,000,000
22. 1/32
23. -784
24. 9
25. 1.743
26. 54.90
27. 63
28. 1022.83
29. 4.56×10^{-1} m
30. 1.5×10^{-3} km^2
31. 3.6×10^{13} m^2
32. 1.25×10^{-7} m^3
33. 66 2/3%
34. 0.125
35. 1/8
36. 25%
37. 20
38. 6
39. 2
40. -24
41. 0.00495
42. 17500
43. 8.75×10^{-4}
44. 9.25×10^{6}
45. $8A^4$
46. $16B^6$
47. 12C
48. E/125
49. $\frac{5B^2}{A^2C^3}$
50. 16
51. $\frac{A(D^2 - A)}{2D^2}$
52. $\frac{37A}{60}$
53. 1 ½
54. 72
55. 5 2/3
56. Undefined
57. $2A^2 - A - 6$
58. $7A^3B - 7AB^2$
59. $16E^2 - 24E + 9$
60. $-6F^2 + F + 7$
61. G = 8
62. H = 4
63. J = 6
64. K = 3/7
65. T = D/V
66. V = AT + U
67. $U = \pm\sqrt{V^2 - 2AD}$
68. $T = \pm\sqrt{2D/A}$
69. 40
70. 6
71. 38 D, 35 Q
72. Boy 9, Father 44
73. A = 3, B = 1
74. C = -1, D = 1/6
75. E = -3, F = 2
76. G = ½, H = -3/2
77. A
78. (0,2)
79. -1
80. (-1,0)
81. 4 3
82. 0.01
83. $XY\sqrt{Y}$
84. $(4/A)\sqrt{1/5\ A}$
85. $\frac{B + 2}{2}$
86. $\frac{D - 7}{D - 5}$
87. $\frac{2F - 1}{2F + 3}$
88. $\frac{3(H^2 + 3)}{4(H^2 + 1)}$
89. 105 sq. units
90. 60 cu. Units
91. 42 units
92. 129.25 sq. units
93. 360
94. 72
95. 125
96. 75
97. 3/5
98. 4/5
99. 5/12
100. 10