# Cat5 Level 22 Teacher's Guide

(Semester) Spring testing: May 1st – June 30

## Language and Mathematics Subtests

Please note that *Cat5 Level 22 subtests* cover the *Grade 12 curriculum,* so it is intended for students who have completed most of Grade 12. The testing dates are noted above, please administer the tests within that timeframe.

## Language Subtests

|  | Requirements | Administration Times |
|---|---|---|
| Reading |  | 60 minutes |
| Word Analysis |  |  |
| Vocabulary |  |  |
| Writing Conventions |  | 40 minutes |
| Spelling |  |  |

## Mathematics Subtests

|  | Requirements | Administration Times |
|---|---|---|
| Mathematics* | Calculators permitted | 70 minutes |
| Computation & Estimation |  |  |
| Real World Math |  |  |

*Please refer to Appendix B to determine which stream the course code refers to in your province.*

## Reminders

☐ Teachers should administer *each* subtest in one sitting.

☐ (For Language subtests) Administer the Reading subtest first.

  o The contexts for many of the questions in the language subtests are taken from themes found in the Reading subtest.

☐ Refer to *Appendix A* below to determine the *English Language courses* in your province that are associated with each subtest.

☐ Refer to *Appendix B* below to determine the *Secondary Mathematics courses* that are associated with each subtest.

  o Teachers who teach both streams in *Academic/Applied, Foundations/Pre-Calculus, or College/University* should create separate test sessions to provide students with the correct test (e.g. Academic students will have access to the Academic test session).

☐ Refer to *Appendix C* below to view the *Secondary Mathematics Formulas* for ON and WNCP curriculum.

  o To print out the appropriate formula sheet for your students, please visit the Cat5 website and select *"Math Formula Sheets"* under Resources.

  o Please remind students to use π **= 3.14** for ALL calculations using π**.**

## Pause and Log Out Sessions

☐ In order to pause the session during a test sitting, teachers can locate the *Pause Session* button on their Teacher Dashboard in the **Session Details** page.

  o Students must select the **Next button [>]** in order for the pause to be triggered.

☐ After you return from a break, click on *Resume Session* to give access to students without them having to log in again.

☐ At the *end of each sitting*, please select *Pause Session* if the devices will not be used for anything else.

☐ At the *end of the testing day*, always select *Log Out Session for all* on the Teacher Dashboard (in Session Details page) to ensure that students do not continue the test outside of the classroom or outside of your scheduled testing time.

**For other user documentation, please visit: Cat5 Resources.**

# Appendix A:
## English Language Guide for Secondary Teachers

| Provinces | Grade 9 | Grade 10 | | Grade 11 | | Grade 12 | |
|---|---|---|---|---|---|---|---|
| ON | De-streamed English (ENL1W) | Applied English (ENG2P) | Academic English (ENG2D) | English College (ENG3C) | English University (ENG3U) | English College (ENG4C) | English University (ENG4U) |
| SK | ELA 9 | | ELA A10 and ELA B10 | | ELA 20 | | ELA A30 and ELA B30 |
| AB | ELA 9 | ELA 10-2 | ELA 10-1 | ELA 20-2 | ELA 20-1 | ELA 30-2 | ELA 30-1 |
| BC | ELA 9 | | Literary Studies 10, English First Peoples Literary Studies 10 | Communications 11 | Literary Studies 11, English First Peoples Literary Studies and New Media 11 | Communications 12 | English Studies 12, Literary Studies 12, English First Peoples 12 |
| MB | Grade 9 ELA | | ELA 20F | | ELA Comprehensive Focus 30S, ELA Literary Focus 30S, ELA Transactional Focus 30S | | ELA Comprehensive Focus 40S, ELA Literary Focus 40S, ELA Transactional Focus 40S |
| NB | English 9 | | English 10 | | Englis 112 | | English 122 |
| QC (English only) | ENG632-306, ENG-306-3, and ENG-3062-3 | | ENG-632-406, ENG-4061-3, and ENG-4062-3 | Secondary Year 4 English/SELA IV 630-416, ENG-4061-3 and ENG-4062-3 (CERP) | ENG 5016-3 and 5062-3 (STG), Secondary Year 4 ENG/ SELA IV, CERP | Secondary Year 5 English/SELA V (English as a First Language) 630-516, ENG-5061-3 and ENG-5062-3 (CERP) | |
| NS | ELA 9 | | English 10: Foundation Year | | English 11 | | English 12 |
| PE | ELA 9 | | ELA 10, ENG421A, and ENG421B (Pre-IB) | | ELA 11, ENG 521A | | ELA 12, English 621A |
| NL | ELA 9 | | English 1201 | | English 2201 | | English 3201 |
| NT | ELA Grade 9 | | ELA 10-1 | ELA 20-2 | ELA 20-1 | ELA 30-2 | ELA 30-1 |
| NU | ELA Grade 9 | | ELA 10-1 | ELA 20-2 | ELA 20-1 | ELA 30-2 | ELA 30-1 |
| YK | ELA 9 | | Literary Studies 10, English First Peoples Literary Studies 10 | Communications 11 | Literary Studies 11, English First Peoples Literary Studies and New Media 11 | Communications 12 | English Studies 12, Literary Studies 12, English First Peoples 12 |

## Appendix B:
## Mathematics Guide for Secondary Teachers

| Provinces | Grade 9* | Grade 10 | | Grade 11 | | Grade 12 | |
|---|---|---|---|---|---|---|---|
| | | **Applied** | **Academic** | **College** | **University** | **College** | **University** |
| **ON** | Mathematics (MTH1W) | Foundations of Mathematics (MFM2P) | Principles of Mathematics (MPM2D) | Foundations of College Math (MBF3C) / Functions & Applications (MCF3M) | Functions (MCR3U) | Mathematics for College Technology (MCT4C) | Advanced Functions (MHF4U) |
| **W.N.C.P.** | **Mathematics** | **Mathematics** | | **Foundations** | **Pre-Calculus** | **Foundations** | **Pre-Calculus** |
| **SK** | Mathematics | Foundations of Mathematics and Pre-Calculus 10 | | Foundations of Mathematics 20 | Pre-Calculus 20 | Foundations of Mathematics 30 | Pre-Calculus 30 |
| **AB** | Mathematics | Mathematics 10c (combined) | | Mathematics 20-2 | Mathematics 20-1 | Mathematics 30-2 | Mathematics 30-1 |
| **BC** | Mathematics 9 | Foundations of Mathematics and Pre-Calculus 10 | | Foundations of Mathematics 11 | Pre-Calculus 11 | Foundations of Mathematics 12 | Pre-Calculus 12 |
| **MB** | Mathematics (10F) | Intro to Applied and Pre-Calculus Mathematics (20S) | | Applied Mathematics (30S) | Pre-Calculus Mathematics (30S) | Applied Mathematics (40S) | Pre-Calculus Mathematics (40S) |
| **NB** | Mathematics 9 | Geometry, Measurement, and Finance 10 / Number, Relations, and Functions 10 | | Foundations of Mathematics 110 | Pre-Calculus 110 | Foundations of Mathematics 120 | Pre-Calculus A 120 / Pre-Calculus B 120 |
| **QC** | Cycle 2 First Year Mathematics | Cycle 2 Second Year Mathematics *Technical & Scientific Option or Science Option* | | Cycle 2 Third Year Mathematics *Technical & Scientific Option* | Cycle 2 Third Year Mathematics *Science Option* | | |
| **NS** | Mathematics | Mathematics 10 | | Mathematics 11 | Pre-Calculus | Mathematics 12 | Pre-Calculus 12 |
| **PE** | Mathematics | Foundations and Pre-Calculus | | Foundations | Pre-Calculus | Foundations | Pre-Calculus 12 |
| **NL** | Mathematics | Mathematics 1201 | | Mathematics 2201 | Mathematics 2200 | Mathematics 3201 | Mathematics 3200 |
| **NT** | Mathematics | Mathematics 10c (combined) | | Mathematics 20-2 | Mathematics 20-1 | Mathematics 30-2 | Mathematics 30-1 |
| **NU** | Mathematics | Mathematics 10c (combined) | | Mathematics 20-2 | Mathematics 20-1 | Mathematics 30-2 | Mathematics 30-1 |
| **YK** | Mathematics | Foundations and Pre-Calculus | | Foundations of Mathematics | Pre-Calculus | Foundations | Pre-calculus |

*As of 2021, the mathematics subtest for grade 9 in all provinces is called "Mathematics", with no distinct streams.*

# Appendix C:
## Mathematics Formula Sheets*

***To print Formula Sheet, go to: Cat5 website -> Resources -> Math Formula Sheets, and select the appropriate grade/course & curriculum.***

| Ontario Grade 12 University & College | W.N.C.P.* Grade 12 Pre-Calculus & Foundations |
|---|---|

**W.N.C.P.* Grade 12 Pre-Calculus & Foundations column:**

*Note: in addition to the Ontario formulas, the WNCP curriculum also includes:*

**Compound Interest Formula: (Foundations)**
$A = P(1 + i)^n$, *A* is the Amount and *P* is the Principal

**Combinations and Permutations: (Pre-Calculus & Foundations)**
$$_nP_r = \frac{n!}{(n-r)!} \quad \text{and} \quad _nC_r = \frac{n!}{(n-r)!r!}$$

**Ontario Grade 12 University & College column:**

**Pythagorean Theorem**
$$a^2 + b^2 = c^2, \text{ where } c \text{ is the length of the hypotenuse}$$

**Linear Relations**
Slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$

**Quadratic Formula**
$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

**Trigonometry**

$$\sin\theta = \frac{opposite}{hypotenuse} \qquad \csc\theta = \frac{hypotenuse}{opposite}$$
$$\cos\theta = \frac{adjacent}{hypotenuse} \qquad \sec\theta = \frac{hypotenuse}{adjacent}$$
$$\tan\theta = \frac{opposite}{adjacent} \qquad \cot\theta = \frac{adjacent}{opposite}$$

*Sine Law*
$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

*Cosine Law*
$$a^2 = b^2 + c^2 - 2bc\cos(A)$$

*CAST Rule*

| S | A |
|---|---|
| T | C |

$\pi$ radians = 180°

*Sum and Difference Identities*
$$\sin(A + B) = \sin A \cos B + \cos A \sin B \qquad \cos(A + B) = \cos A \cos B - \sin A \sin B$$
$$\sin(A - B) = \sin A \cos B - \cos A \sin B \qquad \cos(A - B) = \cos A \cos B + \sin A \sin B$$

***Area and Volume:*** for ALL calculations using π, *always use* **π = 3.14**

Area of a **circle** with radius *r*:          Circumference of a **circle** with radius *r*
$$A = \pi r^2 \qquad\qquad\qquad C = 2\pi r$$

Area of a **triangle** with base *b* and height *h*:
$$A = \frac{1}{2}bh$$

Volume of **Prism**:
V = area of base x height of the prism

Volume of **Pyramid**:
V = $\frac{1}{3}$ × (the volume of the enclosing prism)

Volume of **Cylinder** with height *h* and radius *r*:
$$V = \pi r^2 h$$

Volume of **Sphere** with radius *r*:
$$V = \frac{4}{3}\pi r^3$$