

**Education Quality and
Accountability Office**



Grade 9 Assessment of Mathematics

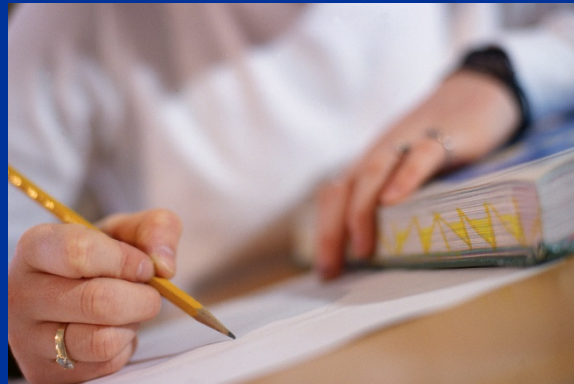
Who

All students taking Grade 9 Academic and
Grade 9 Applied Math this semester



When

- Friday Jan 18th **Booklet 1**
- Monday Jan 21st **Booklet 2**
- Period 1 in the cafeteria unless otherwise arranged as per regular classroom assessment practice.



Where and What

- Assemble in cafeteria and sit at your designated seat (arranged alpha order by class). There will be a sticker with your name on the package and on the desk.
- Do not open the packages until told to do so. Instructions will be read to you. The teacher supervisors will not be able to speak to you after the instructions are over.

Timing

- You will have 60 minutes to:
 - Read questions in Question Booklet
 - Write answers in Answer Booklet
- If you need a little more time, you may have it. We will provide a late slip to your period 2 teacher if necessary.
- At the end of second day there will be a questionnaire

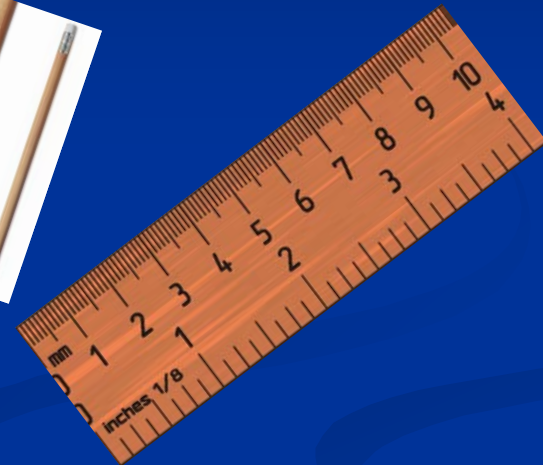
What to Bring

You need

- Pencil and Eraser



- Ruler



- Scientific Calculator



Manipulatives and Graphing Calculators

- You are permitted free access to any manipulatives such as
 - Cube-a-links
 - Geometric solids
 - Algebra tiles
 - Pattern tiles
- You may also use a graphing calculator! Be sure to practice first – your teacher can't talk to you during the test!

No Communication Devices!

- No cell phones, audio- or video-recording devices, digital music players or any e-mail or text-messaging devices will be permitted in the test room, even if you finish the test early.

- Calculators **CANNOT** be shared



Be on time!

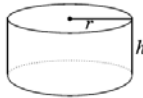
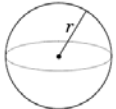
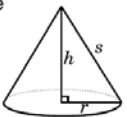
- If you are late, report to the office. Mrs. Viscomi will determine where you will write the test.
- You may **NOT** leave early; use the time to check your work.

The Test

- There are 4 booklets – one Question Booklet and one Answer Booklet per day. You will not have access to Day 1 booklets on Day 2.
- A formula sheet is provided.

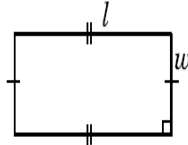
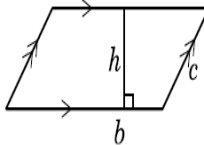
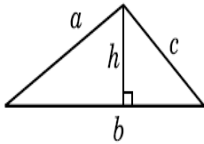
EQAO Provides

- Each student will be given a formula sheet similar to this
- It is yours and you may write on it

Geometric Figure	Surface Area	Volume
Cylinder 	$A_{\text{base}} = \pi r^2$ $A_{\text{lateral surface}} = 2\pi r h$ $A_{\text{total}} = A_{\text{2 bases}} + A_{\text{lateral surface}}$ $= 2\pi r^2 + 2\pi r h$	$V = (A_{\text{base}})(\text{height})$ $V = \pi r^2 h$
Sphere 	$A = 4\pi r^2$	$V = \frac{4}{3}\pi r^3$ or $V = \frac{4\pi r^3}{3}$
Cone 	$A_{\text{lateral surface}} = \pi r s$ $A_{\text{base}} = \pi r^2$ $A_{\text{total}} = A_{\text{lateral surface}} + A_{\text{base}}$ $= \pi r s + \pi r^2$	$V = \frac{(A_{\text{base}})(\text{height})}{3}$ $V = \frac{1}{3}\pi r^2 h$ or $V = \frac{\pi r^2 h}{3}$

Formula Sheet

Grade 9 Applied

Geometric Figure	Perimeter	Area
Rectangle 	$P = l + l + w + w$ or $P = 2(l + w)$	$A = lw$
Parallelogram 	$P = b + b + c + c$ or $P = 2(b + c)$	$A = bh$
Triangle 	$P = a + b + c$	$A = \frac{bh}{2}$ or $A = \frac{1}{2}bh$

EQAO does NOT provide

- Some formulas will NOT be given to you

- Pythagorean Theorem $a^2 + b^2 = c^2$

- Equation of a line

$$y = mx + b$$

$$Ax + By + C = 0$$

- Slope Formula

$$\text{slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

- Interior angle of a polygon

$$180^\circ (n - 2)$$

Key Word Posters

These key words will be posted on the cafeteria walls and are already in your math classroom

KNOW THEM!

You are allowed to refer to them during the test

Key Words for EQAO

Compare: Tell what is the same and what is different.

Describe: Use words to create a mental picture for the reader.

Determine: Use mathematics to find a solution to the problem.

List: Use point form.

Explain: Use words and symbols to make your solution clear.

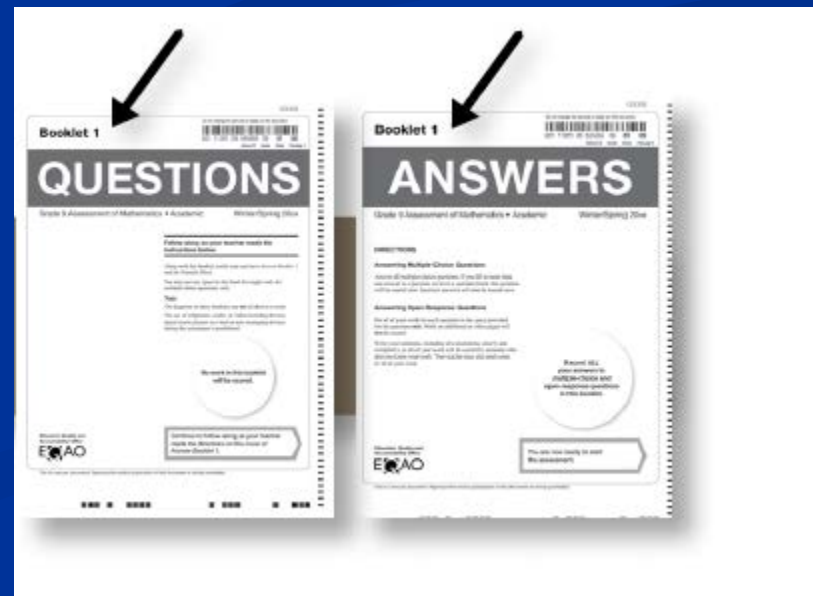
Justify: Give reasons and evidence to show your answer is correct.

Show your work: Record all calculations and all the steps you went through to get your answer. You may use words, numbers, graphs, diagrams, symbols and/or charts.

Here are some *tips* for using the new booklet layout:

1 Make sure you are using the correct *Question and Answer booklets* for each session of the test (e.g., *Question Booklet 1* and *Answer Booklet 1* on the first day of the test).

The top left corner Booklet Numbers need to match!



Types of Questions

- The Question Booklet contains the multiple choice questions. Answers to the multiple choice questions **MUST** be recorded in the Answer Booklet.
- Open response questions are in the Answer Booklet and are to be answered in the space provided.

Multiple Choice Questions

- Be sure to provide an answer for all questions in the answer booklet
- No penalty for incorrect guesses so **DO NOT LEAVE BLANKS!!**
- Eliminate answers that you know are wrong
- Read the question carefully. Take your time, often the answer will take more than one step to figure out.

- 1 Meg has been asked to determine the value of the numerical expression below.

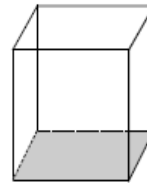
$$\frac{2^{400}}{2^{396}} - 2^3$$

Which of the following is the value of Meg's expression?

- A 1
- B 2
- C 4
- D 8

- 2 Expressions for the base area and volume of a prism are given below.

$$\text{Volume} = 64a^2b^6$$



$$\text{Base area} = 16ab^3$$

Which expression represents the height of the prism?

- F $4a^2b^3$
- G $4a^3b^3$
- H $1024a^3b^9$
- J $1024a^4b^9$

- 3 A rectangular field has a perimeter of $(10a - 6)$ metres and a width of $2a$ metres.



Which expression represents the length of this field?

- A $8a - 6$
- B $12a - 6$
- C $3a - 3$
- D $3a^2 - 3$


- 4 Which value of x satisfies the equation $5 - 2x = 9$?

- F $x = -7$
- G $x = -2$
- H $x = 2$
- J $x = 3$

Multiple Choice Questions

- You will be given a space to record your multiple choice questions in the answer booklet
- Bubble in your answers clearly
- Erase mistakes well
- **ANYTHING** written in the Question Booklet **WILL NOT BE MARKED!!**

Multiple-Choice page 2



Please read the questions in *Question Booklet 1*; then fill in your answers below.

To indicate your answer, use a pencil to fill in the appropriate circle below completely.

Like this: ●

Not like this: ⊗ ✓ ◐ ○

Cleanly erase your answer if you wish to change it and fill in the circle for your new answer.

Fill in only one circle for each question.

1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Open Response Questions

22 Geometric Quilts

Paul's grandmother wants to use quilt pieces to make an eight-pointed star like the one shown.



Her quilt pieces are in the shape of a rhombus with two angles of 130° .



Is it possible to make an eight-pointed star using copies of her quilt piece?
Justify your answer.

- There are typically 3 or 4 open response questions in each booklet
- Answer questions directly in the Answer Booklet
- **Do not leave any questions blank!**
- Write everything that you feel is relevant
- These questions will take some time and thinking
- Mark is based on levels

Marking Scheme

- Open response questions are based on levels
- There are typically four codes given
- 10 , 20, 30 or 40

Grade 9 Assessment of Mathematics, Winter 2009

Open-Response

5 CD Sell-Off

Juan belongs to a CD club that sells CDs for \$11.44 each before tax. His first shipment of CDs costs \$90.49 including 13% tax.

How many CDs are in his first shipment?

Show your work.

Level 40

Grade 9 Assessment of Mathematics, Winter 2009

Open-Response

5 CD Sell-Off

Juan belongs to a CD club that sells CDs for \$11.44 each before tax. His first shipment of CDs costs \$90.49 including 13% tax.

How many CDs are in his first shipment?

Show your work.

$$\text{Price for 1 CD} = 11.44$$

$$\begin{aligned}\text{tax for 1 CD} &= 11.44 \times 0.13 \\ &= \$1.49\end{aligned}$$

$$\begin{aligned}\text{total for 1 CD} &= 11.44 + 1.49 \\ &= 12.93\end{aligned}$$

$$\begin{aligned}\# \text{ of CDs in first shipment} &= 90.49 \div 12.93 \\ &= 7\end{aligned}$$

In his first shipment there are 7 CD's.

Who Marks EQAO?

- Any or all of the questions will be marked by your classroom teacher (before they are returned to EQAO) to be included as 5% of your overall mark.
- All answers are marked by teachers at EQAO. These results will be sent to you when they are released.

Preparation

- Your math exam is on the same knowledge and skills as EQAO
- Studying for EQAO will pay off on your math exam!



Preparing for the Test

Classroom Preparation

- Teachers have been giving you questions to help you prepare in class and at home

Extra Help

- Math Extra Help Room is open Tuesday, Wednesday and Thursday after school in room 304

Resources

- Visit the EQAO webpage for additional practice and information
- www.eqao.com → Grade 9 Math → Examples of the Assessment and Scoring Materials → Student Assessment Booklets and Scoring Guides

www.eqao.com

English Français Contact Us Site Map

Education Quality and Accountability Office
EQAO

About EQAO The Assessments Research Our Data in Action

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Student Assessment Booklets and Scoring Guides

Grade 9 Assessment and Scoring Materials, 2015-2016

EQAO releases examples of actual questions from its previous assessment booklets to help students, parents and educators get familiar with the format of the assessment and the type of questions asked. We provide scoring guides and sample student responses to show how the assessments are scored and what student responses at each score code look like. The last five years of released assessment materials are available.

EQAO releases approximately half of its test questions (called "items") each year. This process allows EQAO to build up a bank of items that can be used in future years.

More Resources

- Infographic – Primary Division, Junior Division and Grade 9 Provincial Assessments, 2016 Results
- 2015–2016
- 2014–2015
- 2013–2014
- 2012–2013

EQAO Online

Administration Dates

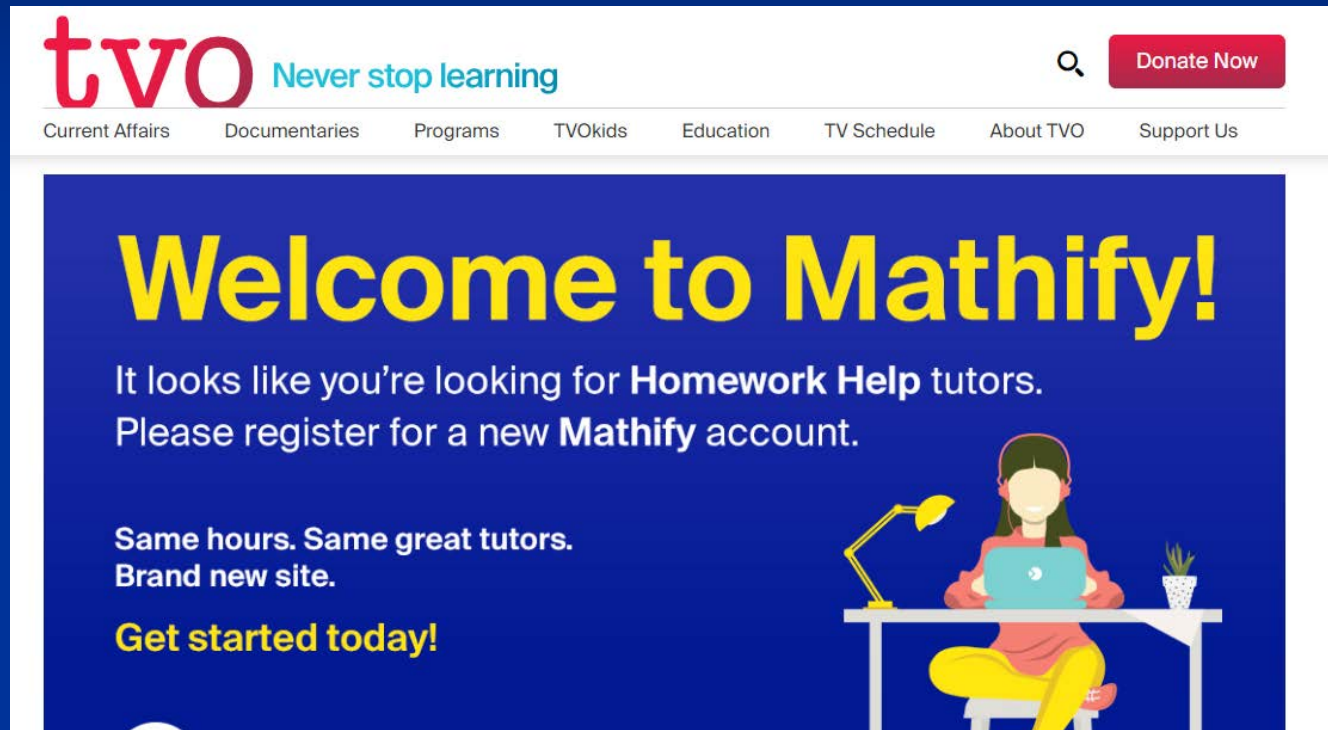
Results

- Grade 3, Primary Division
- Grade 6, Junior Division
- Grade 9 Math

Educators

Parents

Free Online Math Tutoring 7 -10



The image shows a screenshot of the TVO website's banner for Mathify. At the top left is the TVO logo with the tagline "Never stop learning". To the right is a search icon and a red "Donate Now" button. Below the logo is a navigation menu with links for "Current Affairs", "Documentaries", "Programs", "TVOkids", "Education", "TV Schedule", "About TVO", and "Support Us". The main banner has a dark blue background with the text "Welcome to Mathify!" in large yellow letters. Below this, it says "It looks like you're looking for Homework Help tutors. Please register for a new Mathify account." To the left, it says "Same hours. Same great tutors. Brand new site." and "Get started today!". To the right is an illustration of a person with long dark hair wearing a headset, sitting at a desk with a laptop, a desk lamp, and a small potted plant.

tvo Never stop learning

Current Affairs Documentaries Programs TVOkids Education TV Schedule About TVO Support Us

Welcome to Mathify!

It looks like you're looking for **Homework Help** tutors.
Please register for a new **Mathify** account.

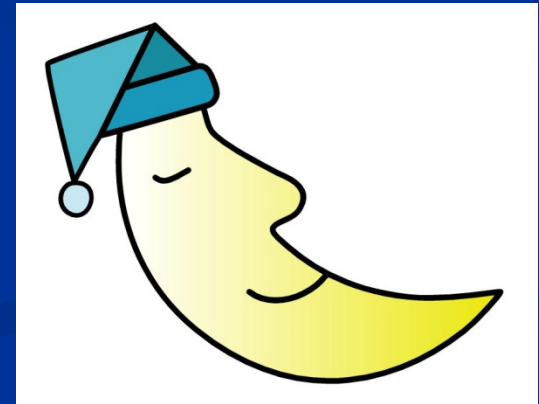
Same hours. Same great tutors.
Brand new site.

Get started today!

<https://www.tvoy.org/mathify-reg>

Come Rested and Refreshed

- Be sure to get a good night's sleep
- Eat a healthy breakfast



Any Questions?



Good Luck!