The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Thursday, January 29, 2009 — 1:15 to 4:15 p.m., only

Print Your Name:

Print Your School's Name:

Print your name and the name of your school in the boxes above. Then turn to the last page of this booklet, which is the answer sheet for Part I. Fold the last page along the perforations and, slowly and carefully, tear off the answer sheet. Then fill in the heading of your answer sheet.

Scrap paper is not permitted for any part of this examination, but you may use the blank spaces in this booklet as scrap paper. A perforated sheet of scrap graph paper is provided at the end of this booklet for any question for which graphing may be helpful but is not required. You may remove this sheet from this booklet. Any work done on this sheet of scrap graph paper will *not* be scored. All work should be written in pen, except graphs and drawings, which should be done in pencil.

This examination has four parts, with a total of 39 questions. You must answer all questions in this examination. Write your answers to the Part I multiple-choice questions on the separate answer sheet. Write your answers to the questions in Parts II, III, and IV directly in this booklet. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc.

When you have completed the examination, you must sign the statement printed at the end of the answer sheet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer sheet cannot be accepted if you fail to sign this declaration.

Notice. . .

A minimum of a scientific calculator, a straightedge (ruler), and a compass must be available for you to use while taking this examination.

The use of any communications device is strictly prohibited when taking this examination. If you use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN.

Part I

Answer all questions in this part. Each correct answer will receive 2 credits. No partial credit will be allowed. For each question, write on the separate answer sheet the numeral preceding the word or expression that best completes the statement or answers the question. [60]

1 Given the true statements:

"Rob plays basketball or tennis."

"Rob does not play tennis."

Which statement must also be true?

(1) Rob plays basketball.
(2) Rob does not play basketball.
(3) Rob does not play basketball, and he does not play tennis.
(4) Rob plays football.

2 Granola bars cost $0.55 each. Which table represents this relationship?

Number of Bars	Total Cost
0	$0.00
2	1.00
4	2.00

(1)

Number of Bars	Total Cost
0	$0.55
2	0.55
4	0.55

(3)

Number of Bars	Total Cost
0	$0.00
2	1.10
4	2.20

(2)

Number of Bars	Total Cost
0	$0.55
2	1.10
4	2.20

(4)

3 A ship sailed t miles on Tuesday and w miles on Wednesday. Which expression represents the average distance per day traveled by the ship?

(1) $2(t + w)$

(3) $\dfrac{t + w}{2}$

(2) $t + \dfrac{w}{2}$

(4) $t - w$

[2]

4 What is the value of x in the equation $2(x - 3) + 1 = 19$?

(1) 6   (3) 10.5

(2) 9   (4) 12

5 Which equation represents the line whose slope is 2 and whose y-intercept is 6?

(1) $y = 2x + 6$ (3) $2y + 6x = 0$

(2) $y = 6x + 2$ (4) $y + 2x = 6$

6 If $0.02x + 0.7 = 0.8$, then x is equal to

(1) 0.5   (3) 5

(2) 2   (4) 50

7 If the probability of a spinner landing on red in a game is $\frac{1}{5}$, what is the probability of it *not* landing on red?

(1) 20%   (3) 50%

(2) 25%   (4) 80%

8 What is the solution for the equation $x + 1 = x + 2$?

(1) −1   (3) all real numbers

(2) $\frac{1}{2}$ (4) There is no solution.

9 If five times the measure of an angle is decreased by 30°, the result is the same as when two times the measure of the angle is increased by 18°. What is the measure of the angle?

(1) −16°   (3) 16°

(2) −4°   (4) 4°

Use this space for computations.

10 The expression $(-2a^2b^3)(4ab^5)(6a^3b^2)$ is equivalent to

(1) $8a^6b^{30}$ (3) $-48a^6b^{10}$
(2) $48a^5b^{10}$ (4) $-48a^5b^{10}$

11 What is the value of n if the number 0.0000082 is written in the form 8.2×10^n?

(1) -6 (3) 5
(2) -5 (4) 6

12 The sum of $\sqrt{27}$ and $\sqrt{108}$ is

(1) $\sqrt{135}$ (3) $3\sqrt{3}$
(2) $9\sqrt{3}$ (4) $4\sqrt{27}$

13 Which equation has the solution set {1,3}?

(1) $x^2 - 4x + 3 = 0$ (3) $x^2 + 4x + 3 = 0$
(2) $x^2 - 4x - 3 = 0$ (4) $x^2 + 4x - 3 = 0$

14 The midpoint of $\overline{AB}$ has coordinates of $(5,-1)$. If the coordinates of A are $(2,-3)$, what are the coordinates of B?
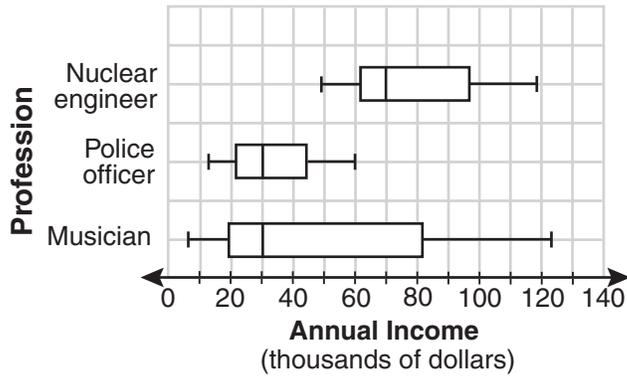
(1) $(8,1)$ (3) $(7,0)$
(2) $(8,-5)$ (4) $(3.5,-2)$

15 If $x = 2$ and $y = -3$, what is the value of $2x^2 - 3xy - 2y^2$?

(1) -20 (3) 8
(2) -2 (4) 16

16 The accompanying box-and-whisker plots can be used to compare the annual incomes of three professions.

Based on the box-and-whisker plots, which statement is true?

(1) The median income for nuclear engineers is greater than the income of all musicians.
(2) The median income for police officers and musicians is the same.
(3) All nuclear engineers earn more than all police officers.
(4) A musician will eventually earn more than a police officer.

17 For which value of m is the expression $\dfrac{15m^2n}{3 - m}$ undefined?

(1) 1   (3) 3
(2) 0   (4) –3

18 What is the image of point $(-3,7)$ after a reflection in the x-axis?

(1) (3,7)   (3) (3,–7)
(2) (–3,–7)   (4) (7,–3)

19 Which statement is *false*?

(1) All parallelograms are quadrilaterals.
(2) All rectangles are parallelograms.
(3) All squares are rhombuses.
(4) All rectangles are squares.

20 The graphs of the equations $x^2 + y^2 = 4$ and $y = x$ are drawn on the same set of axes. What is the total number of points of intersection?

(1) 1   (3) 3

(2) 2   (4) 0

21 Expressed as a single fraction, $\dfrac{3}{4x} - \dfrac{2}{5x}$ is equal to

(1) $-\dfrac{1}{x}$ (3) $\dfrac{1}{20x}$

(2) $\dfrac{1}{9x}$ (4) $\dfrac{7}{20x}$

22 Which point is a solution for the system of inequalities shown on the accompanying graph?

(1) $(-4,-1)$ (3) $(1,1)$

(2) $(2,3)$ (4) $(-2,2)$

23 Which statement is an example of a biconditional statement?

   (1) If Craig has money, he buys a car.
   (2) Craig buys a car if and only if he has money.
   (3) Craig has money or he buys a car.
   (4) Craig has money and he buys a car.

24 Which property of real numbers is illustrated by the equation $52 + (27 + 36) = (52 + 27) + 36$?

   (1) commutative property   (3) distributive property
   (2) associative property   (4) identity property of addition

25 How many different two-letter arrangements can be formed using the letters in the word "BROWN"?

   (1) 10   (3) 20
   (2) 12   (4) 25

26 In the accompanying diagram of right triangle ABC, $BC = 12$ and $m\angle C = 40$.
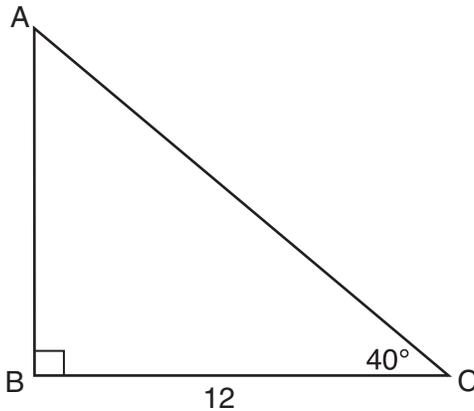
Which single function could be used to find AB?

   (1) tan 50   (3) cos 40
   (2) sin 50   (4) sin 40

27 When 5 is divided by a number, the result is 3 more than 7 divided by twice the number. What is the number?

(1) 1   (3) $\frac{1}{2}$

(2) 2   (4) 5

28 Under which operation is the set of odd integers closed?

(1) addition   (3) multiplication

(2) subtraction   (4) division

29 A basketball squad has ten players. Which expression represents the number of five-player teams that can be made if John, the team captain, must be on every team?

(1) $_{10}C_5$ (3) $_9P_4$

(2) $_9C_4$ (4) $_{10}P_5$

30 Which statement is logically equivalent to "If I am in a mathematics class, then I am having fun"?

(1) If I am not in a mathematics class, then I am not having fun.
(2) If I am having fun, then I am in a mathematics class.
(3) If I am not having fun, then I am not in a mathematics class.
(4) If I am in a mathematics class, then I am not having fun.

Part II

Answer all questions in this part. Each correct answer will receive 2 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [10]

31 In the accompanying diagram, $\triangle QRS$ is similar to $\triangle LMN$, $RQ = 30$, $QS = 21$, $SR = 27$, and $LN = 7$. What is the length of $\overline{ML}$?
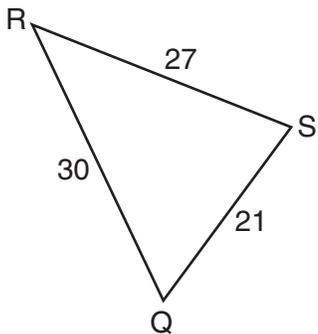
32 The support beams on a bridge intersect in the pattern shown in the accompanying diagram. If $\overline{AB}$ and $\overline{CD}$ intersect at point E, m$\angle AED = 3x + 30$, and m$\angle CEB = 7x - 10$, find the value of x.

33 The "Little People" day care center has a rectangular, fenced play area behind their building. The play area is 30 meters long and 20 meters wide. Find, to the *nearest meter*, the length of a pathway that runs along the diagonal of the play area.

34 Subtract $2x^2 - 5x + 8$ from $6x^2 + 3x - 2$ and express the answer as a trinomial.

35 Express in simplest form: $\dfrac{8x}{x^2 - 16} \div \dfrac{2x}{x + 4}$
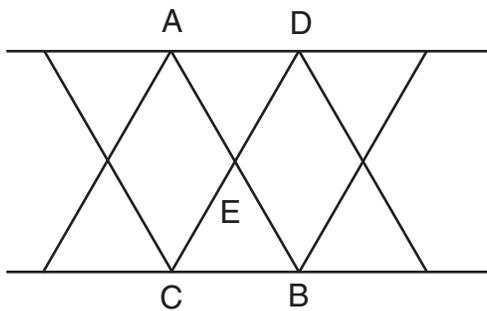
Part III

Answer all questions in this part. Each correct answer will receive 3 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [6]

36 Juan received scores of 82, 76, 93, and 80 on his first four chemistry tests of the year. His goal is to have an 86 average in chemistry for his first five tests. What score must he earn on the next test to achieve an average of exactly 86?

37 On the accompanying grid, graph and label quadrilateral *ABCD*, whose coordinates are *A*(–1,3), *B*(2,0), *C*(2,–1), and *D*(–3,–1). Graph, label, and state the coordinates of *A′B′C′D′*, the image of *ABCD* under a dilation of 2, where the center of dilation is the origin.
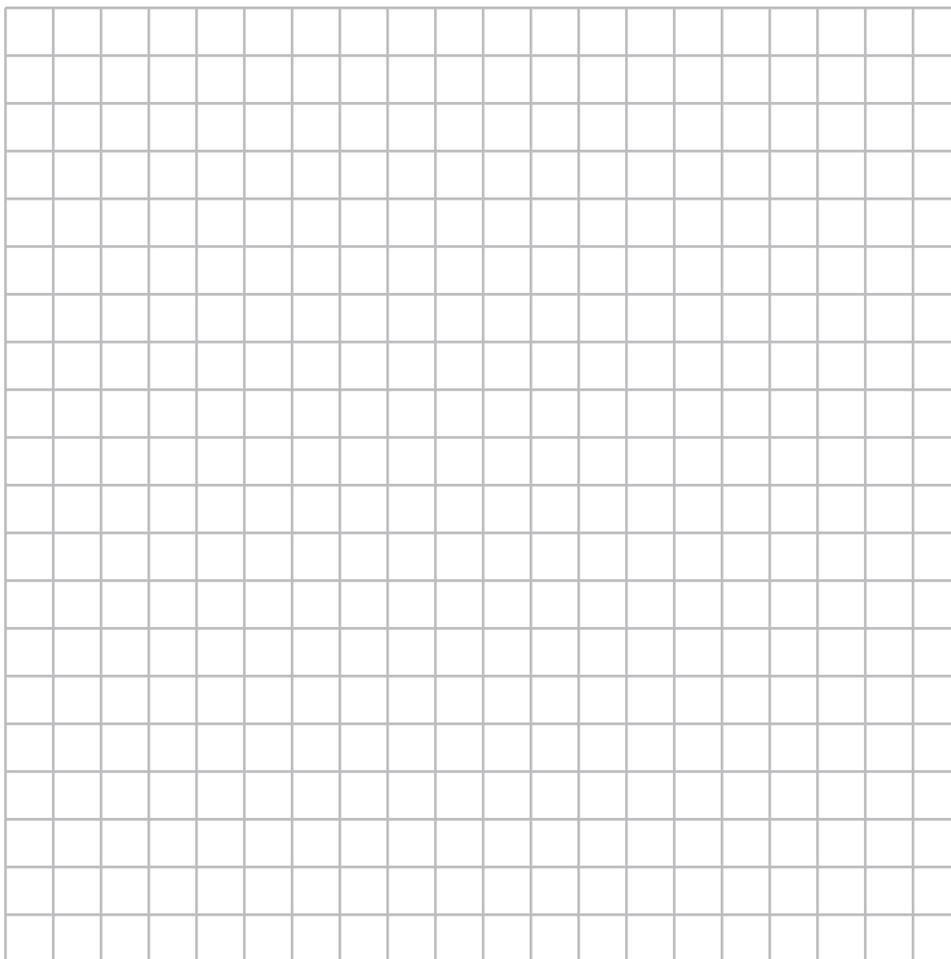
Part IV

Answer all questions in this part. Each correct answer will receive 4 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [8]

38 Mr. Braun has $75.00 to spend on pizzas and soda pop for a picnic. Pizzas cost $9.00 each and the drinks cost $0.75 each. Five times as many drinks as pizzas are needed. What is the maximum number of pizzas that Mr. Braun can buy?

39 The daily high temperatures for the month of February in New York City were: 34°, 37°, 31°, 36°, 30°, 32°, 32°, 34°, 30°, 37°, 31°, 30°, 30°, 31°, 36°, 34°, 36°, 32°, 32°, 30°, 37°, 31°, 36°, 32°, 31°, 36°, 31°, and 35°.

Complete the table below.

Use the table to construct a frequency histogram for these temperatures on the accompanying grid.
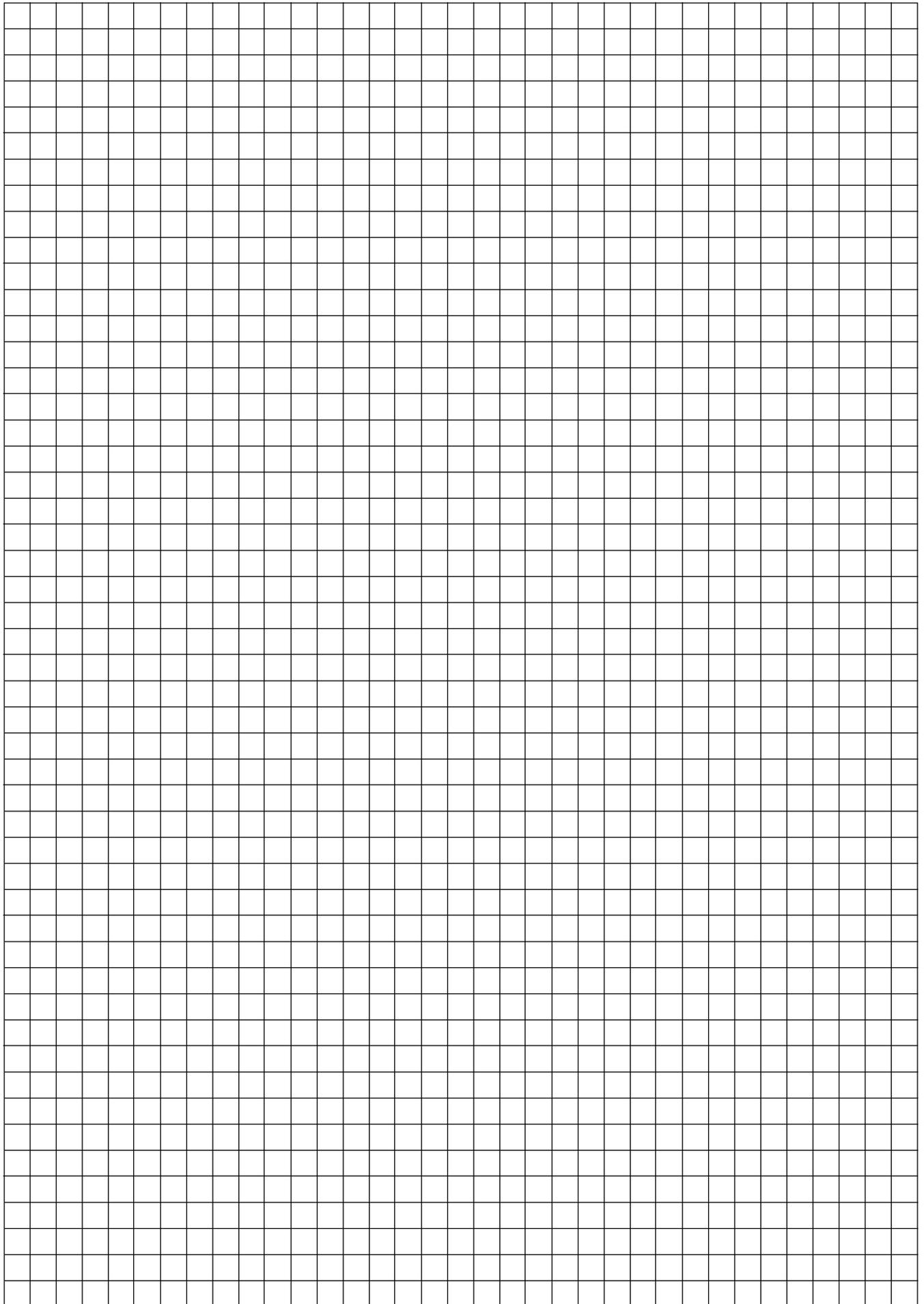
Temperature, in Degrees	Tally	Frequency
30		
31		
32		
33		
34		
35		
36		
37		
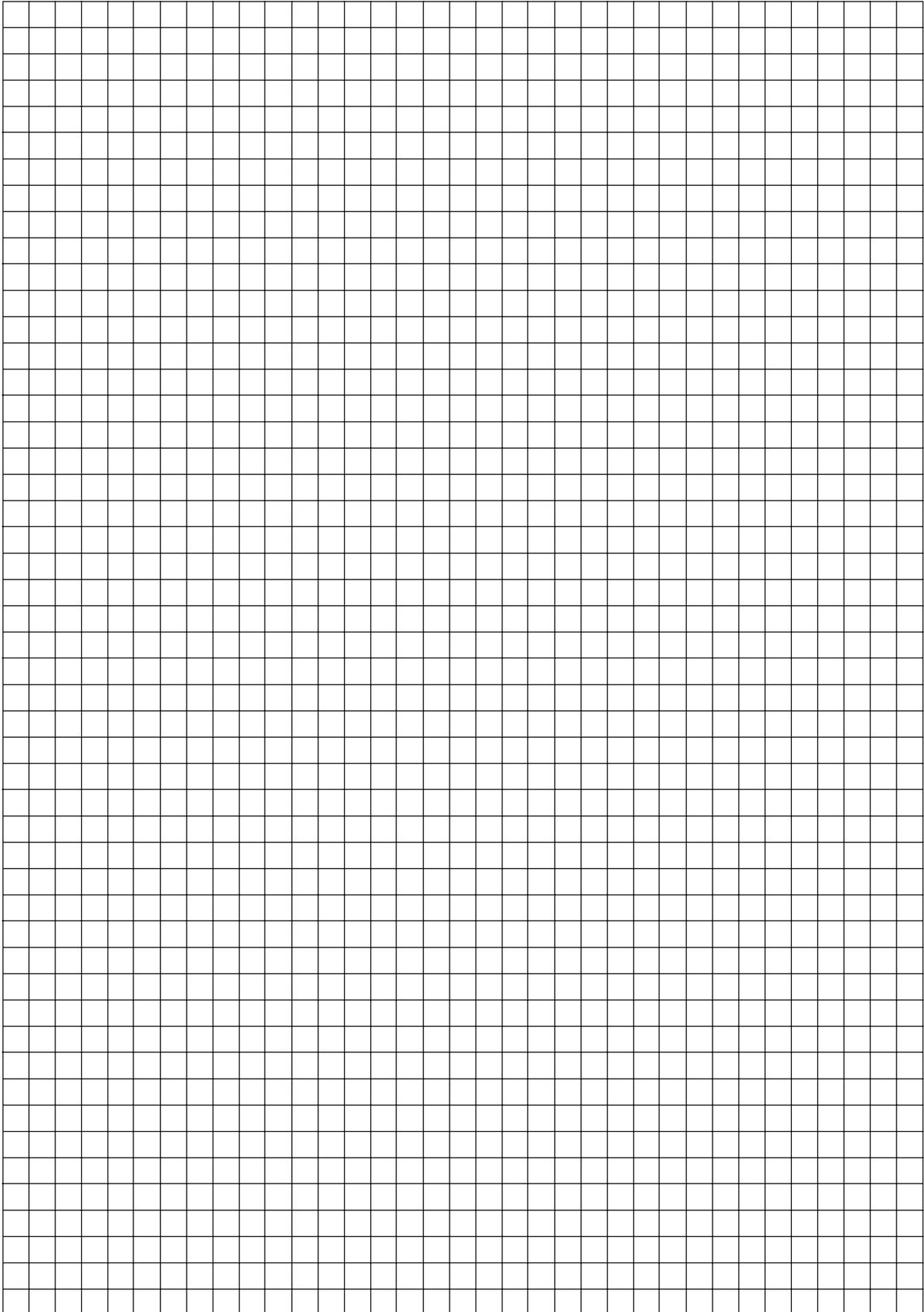
MATHEMATICS A

Thursday, January 29, 2009 — 1:15 to 4:15 p.m., only

ANSWER SHEET

Student .... Sex: ☐ Male ☐ Female   Grade ....

Teacher .... School ....

Your answers to Part I should be recorded on this answer sheet.

Part I

Answer all 30 questions in this part.

1	9	17	25 ....
2	10	18	26 ....
3	11	19	27 ....
4	12	20	28 ....
5	13	21	29 ....
6	14	22	30 ....
7	15	23	
8	16	24	

Your answers for Parts II, III, and IV should be written in the test booklet.

The declaration below should be signed when you have completed the examination.

I do hereby affirm, at the close of this examination, that I had no unlawful knowledge of the questions or answers prior to the examination and that I have neither given nor received assistance in answering any of the questions during the examination.

_____

Signature

Tear Here

Tear Here

MATHEMATICS A			
Question	Maximum Credit	Credits Earned	Rater's/Scorer's Initials
Part I 1–30	60		
Part II 31	2		
32	2		
33	2		
34	2		
35	2		
Part III 36	3		
37	3		
Part IV 38	4		
39	4		
Maximum Total	84		

Total Raw Score   **Checked by**   **Scaled Score** (from conversion chart)

Rater's/Scorer's Name (minimum of three)

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Thursday, January 29, 2009 — 1:15 to 4:15 p.m., only

SCORING KEY

Mechanics of Rating

The following procedures are to be followed for scoring student answer papers for the Mathematics A examination. More detailed information about scoring is provided in the publication *Information Booklet for Scoring the Regents Examinations in Mathematics A and Mathematics B*.

Use only *red* ink or *red* pencil in rating Regents papers. Do *not* attempt to correct the student's work by making insertions or changes of any kind. Use check marks to indicate student errors.

Unless otherwise specified, mathematically correct variations in the answers will be allowed. Units need not be given when the wording of the questions allows such omissions.

Each student's answer paper is to be scored by a minimum of three mathematics teachers. On the back of the student's detachable answer sheet, raters must enter their initials in the boxes next to the questions they have scored and also write their name in the box under the heading "Rater's/Scorer's Name."

Raters should record the student's scores for all questions and the total raw score on the student's detachable answer sheet. Then the student's total raw score should be converted to a scaled score by using the conversion chart that will be posted on the Department's web site http://www.emsc.nysed.gov/osa/ on Thursday, January 29, 2009. The student's scaled score should be entered in the box provided on the student's detachable answer sheet. The scaled score is the student's final examination score.

Part I

Allow a total of 60 credits, 2 credits for each of the following. Allow credit if the student has written the correct answer instead of the numeral 1, 2, 3, or 4.

(1) 1	(6) 3	(11) 1	(16) 2	(21) 4	(26) 1
(2) 2	(7) 4	(12) 2	(17) 3	(22) 1	(27) 3
(3) 3	(8) 4	(13) 1	(18) 2	(23) 2	(28) 3
(4) 4	(9) 3	(14) 1	(19) 4	(24) 2	(29) 2
(5) 1	(10) 3	(15) 3	(20) 2	(25) 3	(30) 3

Updated information regarding the rating of this examination may be posted on the New York State Education Department's web site during the rating period. Check this web site http://www.emsc.nysed.gov/osa/ and select the link "Examination Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents examination period.

General Rules for Applying Mathematics Rubrics

I. General Principles for Rating

The rubrics for the constructed-response questions on the Regents Examinations in Mathematics A and Mathematics B are designed to provide a systematic, consistent method for awarding credit. The rubrics are not to be considered all-inclusive; it is impossible to anticipate all the different methods that students might use to solve a given problem. Each response must be rated carefully using the teacher's professional judgment and knowledge of mathematics; all calculations must be checked. The specific rubrics for each question must be applied consistently to all responses. In cases that are not specifically addressed in the rubrics, raters must follow the general rating guidelines in the publication *Information Booklet for Scoring the Regents Examinations in Mathematics A and Mathematics B*, use their own professional judgment, confer with other mathematics teachers, and/or contact the consultants at the State Education Department for guidance. During each Regents examination administration period, rating questions may be referred directly to the Education Department. The contact numbers are sent to all schools before each administration period.

II. Full-Credit Responses

A full-credit response provides a complete and correct answer to all parts of the question. Sufficient work is shown to enable the rater to determine how the student arrived at the correct answer.

When the rubric for the full-credit response includes one or more examples of an acceptable method for solving the question (usually introduced by the phrase "such as"), it does **not** mean that there are no additional acceptable methods of arriving at the correct answer. Unless otherwise specified, mathematically correct alternative solutions should be awarded credit. The only exceptions are those questions that specify the type of solution that must be used; e.g., an algebraic solution or a graphic solution. A correct solution using a method other than the one specified is awarded half the credit of a correct solution using the specified method.

III. Appropriate Work

Full-Credit Responses: The directions in the examination booklet for all the constructed-response questions state: "Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, charts, etc." The student has the responsibility of providing the correct answer **and** showing how that answer was obtained. The student must "construct" the response; the teacher should not have to search through a group of seemingly random calculations scribbled on the student paper to ascertain what method the student may have used.

Responses With Errors: Rubrics that state "Appropriate work is shown, but …" are intended to be used with solutions that show an essentially complete response to the question but contain certain types of errors, whether computational, rounding, graphing, or conceptual. If the response is incomplete, i.e., an equation is written but not solved or an equation is solved but not all of the parts of the question are answered, appropriate work has **not** been shown. Other rubrics address incomplete responses.

IV. Multiple Errors

Computational Errors, Graphing Errors, and Rounding Errors: Each of these types of errors results in a 1-credit deduction. Any combination of two of these types of errors results in a 2-credit deduction. No more than 2 credits should be deducted for such mechanical errors in any response. The teacher must carefully review the student's work to determine what errors were made and what type of errors they were.

Conceptual Errors: A conceptual error involves a more serious lack of knowledge or procedure. Examples of conceptual errors include using the incorrect formula for the area of a figure, choosing the incorrect trigonometric function, or multiplying the exponents instead of adding them when multiplying terms with exponents. A response with one conceptual error can receive no more than half credit.

If a response shows repeated occurrences of the same conceptual error, the student should not be penalized twice. If the same conceptual error is repeated in responses to other questions, credit should be deducted in each response.

If a response shows two (or more) different major conceptual errors, it should be considered completely incorrect and receive no credit.

If a response shows one conceptual error and one computational, graphing, or rounding error, the teacher must award credit that takes into account both errors: i.e., awarding half credit for the conceptual error and deducting 1 credit for each mechanical error (maximum of two deductions for mechanical errors).

Part II

For each question, use the specific criteria to award a maximum of two credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(31)   **[2]** 10, and appropriate work is shown.

     [1] Appropriate work is shown, but one computational error is made.

<div align="center">***or***</div>

     [1] Appropriate work is shown, but one conceptual error is made, such as writing an incorrect proportion.

<div align="center">***or***</div>

     [1] A correct proportion is written, but no further correct work is shown.

<div align="center">***or***</div>

     [1] 10, but no work is shown.

     [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(32)   **[2]** 10, and appropriate work is shown.

     [1] Appropriate work is shown, but one computational error is made.

<div align="center">***or***</div>

     [1] Appropriate work is shown, but one conceptual error is made, such as using the equation $3x + 30 + 7x - 10 = 180$.

<div align="center">***or***</div>

     [1] A correct equation is written, but no further correct work is shown.

<div align="center">***or***</div>

     [1] 10, but no work is shown.

     [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(33)   **[2]** 36, and appropriate work is shown.

   [1] Appropriate work is shown, but one computational or rounding error is made.

or

   [1] Appropriate work is shown, but one conceptual error is made.

or

   [1] 36, but no work is shown.

   [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(34)   **[2]** $4x^2 + 8x - 10$, and appropriate work is shown.

   [1] Appropriate work is shown, but one computational error is made.

or

   [1] Appropriate work is shown, but one conceptual error is made, such as not distributing the negative sign or subtracting in the wrong order.

or

   [1] $4x^2 + 8x - 10$, but no work is shown.

   [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(35)   **[2]** $\dfrac{4}{x - 4}$, and appropriate work is shown.

   [1] Appropriate work is shown, but one computational or factoring error is made.

or

   [1] Appropriate work is shown, but one conceptual error is made.

or

   [1] $\dfrac{4}{x - 4}$, but no work is shown.

   [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

Part III

For each question, use the specific criteria to award a maximum of three credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(36)   **[3]** 99, and appropriate work is shown, such as solving the equation $\dfrac{x + 331}{5} = 86$

or trial and error with at least three trials and appropriate checks.

[2] Appropriate work is shown, but one computational error is made.

or

[2] The trial-and-error method is used, but only two trials and appropriate checks are shown.

[1] Appropriate work is shown, but two or more computational errors are made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] The trial-and-error method is attempted and least six systematic trials and appropriate checks are shown, but no solution is found.

or

[1] 99, but no work or only one trial with an appropriate check is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

[OVER]

(37) **[3]** Quadrilateral *ABCD* and its image are graphed and labeled correctly, and the coordinates of *A′B′C′D′* are stated as (–2,6), (4,0), (4,–2), and (–6,–2).

[2] Appropriate work is shown, but one computational or graphing error is made.

or

[2] Quadrilateral *A′B′C′D′* is graphed and labeled correctly, and its coordinates are stated correctly, but quadrilateral *ABCD* is not graphed.

or

[2] Quadrilateral *ABCD* is graphed incorrectly, but an appropriate image is graphed and labeled, and the appropriate coordinates of *A′B′C′D′* are stated.

or

[2] Both quadrilaterals are graphed correctly, and the coordinates of *A′B′C′D′* are stated correctly, but one or both of the quadrilaterals are not labeled.

or

[2] Both quadrilaterals are graphed and labeled correctly, but the coordinates of *A′B′C′D′* are not stated or are stated incorrectly.

[1] Appropriate work is shown, but two or more computational or graphing errors are made.

or

[1] Appropriate work is shown, but one conceptual error is made.

or

[1] Both quadrilaterals are graphed correctly, but neither is labeled, and the coordinates of *A′B′C′D′* are not stated or are stated incorrectly.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

Part IV

For each question, use the specific criteria to award a maximum of four credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(38)   **[4]** 5, and appropriate work is shown, such as an algebraic solution or trial and error with at least three trials and appropriate checks.

[3] Appropriate work is shown, but one computational or rounding error is made.

[2] Appropriate work is shown, but two or more computational or rounding errors are made.

or

[2] Appropriate work is shown, but one conceptual error is made.

or

[2] The trial-and-error method is used, but only two trials and appropriate checks are shown.

or

[2] The trial-and-error method is attempted and at least six systematic trials and appropriate checks are shown, but no solution is found.

or

[2] A correct inequality or equation is written, but no further correct work is shown.

[1] Appropriate work is shown, but one conceptual error and one computational or rounding error are made.

or

[1] 5, but no work or only one trial with an appropriate check is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(39) **[4]** The frequency table is completed correctly and a frequency histogram is drawn with both axes labeled correctly.

[3] The frequency table is completed correctly, but one graphing error is made, such as an incorrect scale or not labeling the axes correctly.

or

[3] An incorrect frequency table is shown, but an appropriate frequency histogram is drawn and labeled.

[2] The frequency table is completed correctly, but two or more graphing errors are made.

or

[2] The frequency table is completed correctly, but one conceptual error is made, such as drawing an appropriate bar graph or a cumulative frequency histogram.

[1] Appropriate work is shown, but one conceptual error and one graphing error are made.

or

[1] The frequency table is completed correctly, but no further correct work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

Map to Learning Standards

Key Ideas	Item Numbers
Mathematical Reasoning	1, 23, 30
Number and Numeration	17, 24, 28
Operations	10, 11, 12, 15, 21, 34, 35
Modeling/Multiple Representation	3, 18, 19, 31, 32, 37, 38
Measurement	5, 14, 16, 26, 33, 36, 39
Uncertainty	7, 25, 29
Patterns/Functions	2, 4, 6, 8, 9, 13, 20, 22, 27

Regents Examination in Mathematics A

January 2009

Chart for Converting Total Test Raw Scores to Final Examination Scores (Scaled Scores)

The *Chart for Determining the Final Examination Score for the January 2009 Regents Examination in Mathematics A* will be posted on the Department's web site **http://www.emsc.nysed.gov/osa/** on Thursday, January 29, 2009. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students' final scores for this administration.

Online Submission of Teacher Evaluations of the Test to the Department

Suggestions and feedback from teachers provide an important contribution to the test development process. The Department provides an online evaluation form for State assessments. It contains spaces for teachers to respond to several specific questions and to make suggestions. Instructions for completing the evaluation form are as follows:

1. Go to www.emsc.nysed.gov/osa/exameval.
2. Select the test title.
3. Complete the required demographic fields.
4. Complete each evaluation question and provide comments in the space provided.
5. Click the SUBMIT button at the bottom of the page to submit the completed form.

As a reminder . . .
 Regents examinations based on the Mathematics A syllabus will not be offered after January 2009.
 Regents examinations based on the Mathematics B syllabus will not be offered after June 2010.

Regents Examination in Mathematics A
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**Chart for Converting Total Test Raw Scores to
Final Examination Scores (Scale Scores)**

Raw Score	Scale Score	Raw Score	Scale Score	Raw Score	Scale Score
84	100	55	80	27	56
83	99	54	79	26	55
82	99	53	79	25	54
81	98	52	78	24	52
80	97	51	77	23	51
79	97	50	77	22	50
78	96	49	76	21	48
77	95	48	75	20	47
76	95	47	75	19	45
75	94	46	74	18	43
74	93	45	73	17	42
73	92	44	73	16	40
72	92	43	72	15	38
71	91	42	71	14	36
70	90	41	70	13	35
69	89	40	69	12	32
68	89	39	68	11	30
67	88	38	68	10	28
66	87	37	67	9	26
65	86	36	66	8	24
64	86	35	65	7	21
63	85	34	64	6	19
62	84	33	63	5	16
61	84	32	62	4	13
60	83	31	61	3	11
59	83	30	60	2	7
58	82	29	59	1	4
57	81	28	57	0	0
56	81				

To determine the student's final examination score, find the student's total test raw score in the column labeled "Raw Score" and then locate the scale score that corresponds to that raw score. The scale score is the student's final examination score. Enter this score in the space labeled "Scale Score" on the student's answer sheet.

All student answer papers that receive a scale score of 60 through 64 **must** be scored a second time to ensure the accuracy of the score. For the second scoring, a different committee of teachers may score the student's paper or the original committee may score the paper, except that no teacher may score the same open-ended questions that he/she scored in the first rating of the paper.

Because scale scores corresponding to raw scores in the conversion chart change from one examination to another, it is crucial that for each administration, the conversion chart provided for that administration be used to determine the student's final score. The chart above is usable only for this administration of the Regents Examination in Mathematics A.