The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Tuesday, August 16, 2005 — 8:30 to 11:30 a.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. 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 The weights of all the students in grade 9 are arranged from least to greatest. Which statistical measure separates the top half of this set of data from the bottom half?

(1) mean   (3) median

(2) mode   (4) average

2 Cole's Ice Cream Stand serves sixteen different flavors of ice cream, three types of syrup, and seven types of sprinkles. If an ice cream sundae consists of one flavor of ice cream, one type of syrup, and one type of sprinkles, how many different ice cream sundaes can Cole serve?

(1) 10,836   (3) 3

(2) 336   (4) 26

3 The value of $\frac{7!}{3!}$ is

(1) 840   (3) 7

(2) 24   (4) 4

4 The equation $\ast(\Delta + \heartsuit) = \ast\Delta + \ast\heartsuit$ is an example of the
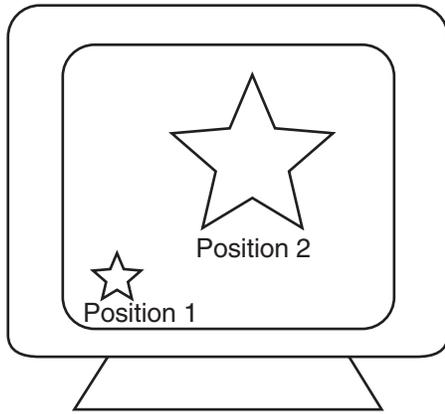
(1) associative law   (3) distributive law

(2) commutative law   (4) transitive law

5 The statement "x is divisible by 5 or x is divisible by 4" is *false* when x equals
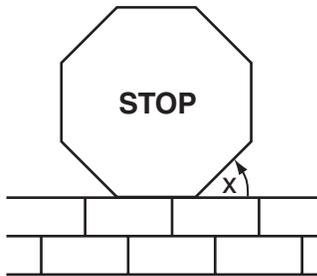
(1) 10   (3) 20

(2) 16   (4) 27

6 As shown in the accompanying diagram, the star in position 1 on a computer screen transforms to the star in position 2.

This transformation is best described as a

(1) line reflection   (3) rotation
(2) translation   (4) dilation

7 A stop sign in the shape of a regular octagon is resting on a brick wall, as shown in the accompanying diagram.

What is the measure of angle x?

(1) 45°   (3) 120°
(2) 60°   (4) 135°

8 The height of a golf ball hit into the air is modeled by the equation $h = -16t^2 + 48t$, where h represents the height, in feet, and t represents the number of seconds that have passed since the ball was hit. What is the height of the ball after 2 seconds?

(1) 16 ft   (3) 64 ft
(2) 32 ft   (4) 80 ft

9 The sum of Scott's age and Greg's age is 33 years. If Greg's age is represented by g, Scott's age is represented by

(1) $33 - g$ (3) $g + 33$
(2) $g - 33$ (4) $33g$

10 The accompanying diagram shows two parallel streets, Main Street and Brooks Road, intersected by Jay Street. The obtuse angle that Jay Street forms with Brooks Road is three times the measure of the acute angle that Jay Street forms with Main Street.
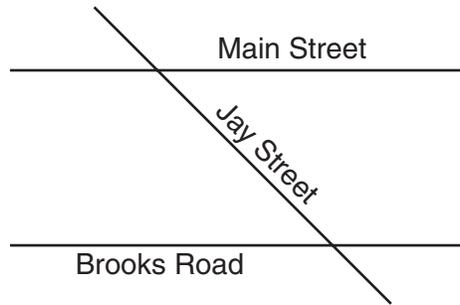
What is the measure of the acute angle formed by Jay Street and Main Street?

(1) 45°   (3) 90°
(2) 60°   (4) 135°

11 The expression 0.62×10^3 is equivalent to

(1) 0.062   (3) 6.2×10^4
(2) 62,000   (4) 6.2×10^2

12 Which equation represents the locus of all points 5 units below the x-axis?

(1) $x = -5$ (3) $y = -5$
(2) $x = 5$ (4) $y = 5$

13 Which ordered pair is *not* in the solution set of $y > 2x + 1$?

(1) (1,4)   (3) (3,8)

(2) (1,6)   (4) (2,5)

14 What is the identity element for ♣ in the accompanying table?

♣	r	s	t	u
r	t	r	u	s
s	r	s	t	u
t	u	t	s	r
u	s	u	r	t

(1) *r*   (3) *t*

(2) *s*   (4) *u*

15 A line segment on the coordinate plane has endpoints (2,4) and (4,y). The midpoint of the segment is point (3,7). What is the value of y?

(1) 11   (3) 5

(2) 10   (4) –2

16 Which numbers are arranged from smallest to largest?

(1) $3.14, \frac{22}{7}, \pi, \sqrt{9.1}$ (3) $\sqrt{9.1}, 3.14, \frac{22}{7}, \pi$

(2) $\sqrt{9.1}, \pi, 3.14, \frac{22}{7}$ (4) $\sqrt{9.1}, 3.14, \pi, \frac{22}{7}$

17 In a certain quadrilateral, two opposite sides are parallel, and the other two opposite sides are *not* congruent. This quadrilateral could be a

(1) rhombus   (3) square

(2) parallelogram   (4) trapezoid

18 A bicyclist leaves Bay Shore traveling at an average speed of 12 miles per hour. Three hours later, a car leaves Bay Shore, on the same route, traveling at an average speed of 30 miles per hour. How many hours after the car leaves Bay Shore will the car catch up to the cyclist?

(1) 8
(3) 5
(2) 2
(4) 4

19 Which letter demonstrates line symmetry but *not* point symmetry?

(1) **T**
(3) **H**
(2) **N**
(4) **S**

20 Sara is building a triangular pen for her pet rabbit. If two of the sides measure 8 feet and 15 feet, the length of the third side could be

(1) 13 ft
(3) 3 ft
(2) 7 ft
(4) 23 ft

21 What is the converse of the statement "If Alicia goes to Albany, then Ben goes to Buffalo"?

(1) If Alicia does not go to Albany, then Ben does not go to Buffalo.
(2) Alicia goes to Albany if and only if Ben goes to Buffalo.
(3) If Ben goes to Buffalo, then Alicia goes to Albany.
(4) If Ben does not go to Buffalo, then Alicia does not go to Albany.

22 What is the value of 2^{-3}?

(1) $\frac{1}{6}$
(3) -6
(2) $\frac{1}{8}$
(4) -8

23 Which is an irrational number?

   (1) $0.\overline{3}$ (3) $\sqrt{49}$

   (2) $\frac{3}{8}$ (4) π

24 What is the sum of $5\sqrt{7}$ and $3\sqrt{28}$?

   (1) $9\sqrt{7}$ (3) $60\sqrt{7}$

   (2) $11\sqrt{7}$ (4) $8\sqrt{35}$

25 The solution set for the equation $x^2 - 5x = 6$ is

   (1) $\{1,-6\}$ (3) $\{-1,6\}$
   (2) $\{2,-3\}$ (4) $\{-2,3\}$

26 The expression $\dfrac{5x^6y^2}{x^8y}$ is equivalent to

   (1) $5x^2y$ (3) $5x^{14}y^3$

   (2) $\dfrac{5y}{x^2}$ (4) $\dfrac{5y^3}{x^{14}}$

27 The expression $_9C_2$ is equivalent to

   (1) $_9P_2$ (3) $_9C_7$

   (2) $_9P_7$ (4) $\frac{9!}{2!}$

28 The graph of the equation $x^2 + y^2 = 4$ can be described as a

   (1) line passing through points $(0,2)$ and $(2,0)$
   (2) parabola with its vertex at $(0,2)$
   (3) circle with its center at the origin and a radius of 2
   (4) circle with its center at the origin and a radius of 4

29 When solved graphically, which system of equations will have *exactly* one point of intersection?

   (1) $y = -x - 20$
       $y = x + 17$

   (3) $y = \frac{3}{5}x + 12$
       $y = 0.6x - 19$

   (2) $y = 0.5x + 30$
       $y = 0.5x - 30$

   (4) $y = -x + 15$
 $y = -x + 25$

30 If $\frac{x}{4} - \frac{a}{b} = 0$, $b \neq 0$, then x is equal to

   (1) $-\frac{a}{4b}$

   (3) $-\frac{4a}{b}$

   (2) $\frac{a}{4b}$

   (4) $\frac{4a}{b}$

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 The accompanying diagram shows a kite that has been secured to a stake in the ground with a 20-foot string. The kite is located 12 feet from the ground, directly over point *X*. What is the distance, in feet, between the stake and point *X*?
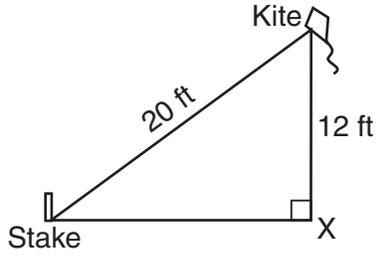
32 There are 30 students on a school bus. Of these students, 24 either play in the school band or sing in the chorus. Six of the students play in the school band but do not sing in the chorus. Fourteen of the students sing in the chorus and also play in the school band. How many students on the school bus sing in the chorus but do *not* play in the band?

33 Factor completely: $5n^2 - 80$

34 Nine hundred students were asked whether they thought their school should have a dress code. A circle graph was constructed to show the results. The central angles for two of the three sectors are shown in the accompanying diagram. What is the number of students who felt that the school should have *no* dress code?
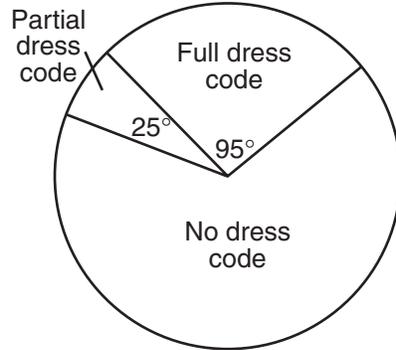

35 Seth bought a used car that had been driven 20,000 miles. After he owned the car for 2 years, the total mileage of the car was 49,400. Find the average number of miles he drove *each month* during those 2 years.

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 A tree casts a shadow that is 20 feet long. The angle of elevation from the end of the shadow to the top of the tree is 66°. Determine the height of the tree, to the *nearest foot.*

37 In the accompanying diagram, the perimeter of Δ*MNO* is equal to the perimeter of square *ABCD*. If the sides of the triangle are represented by $4x + 4$, $5x - 3$, and 17, and one side of the square is represented by $3x$, find the length of a side of the square.

M

4x + 4

N

17

5x − 3

O

A

B

3x

D

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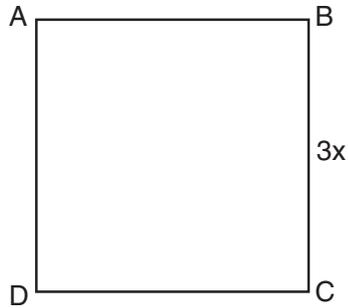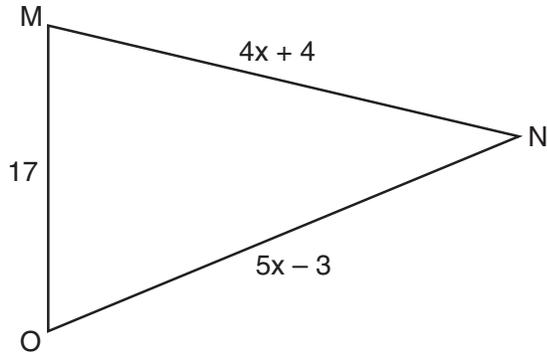
Answer all questions in this part. Each correct answer will receive 4 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [8]

38 Solve the following system of equations:

$$y = x^2 + 4x + 1$$
$$y = 5x + 3$$

[The use of the grid on the next page is optional.]

Question 38 continued
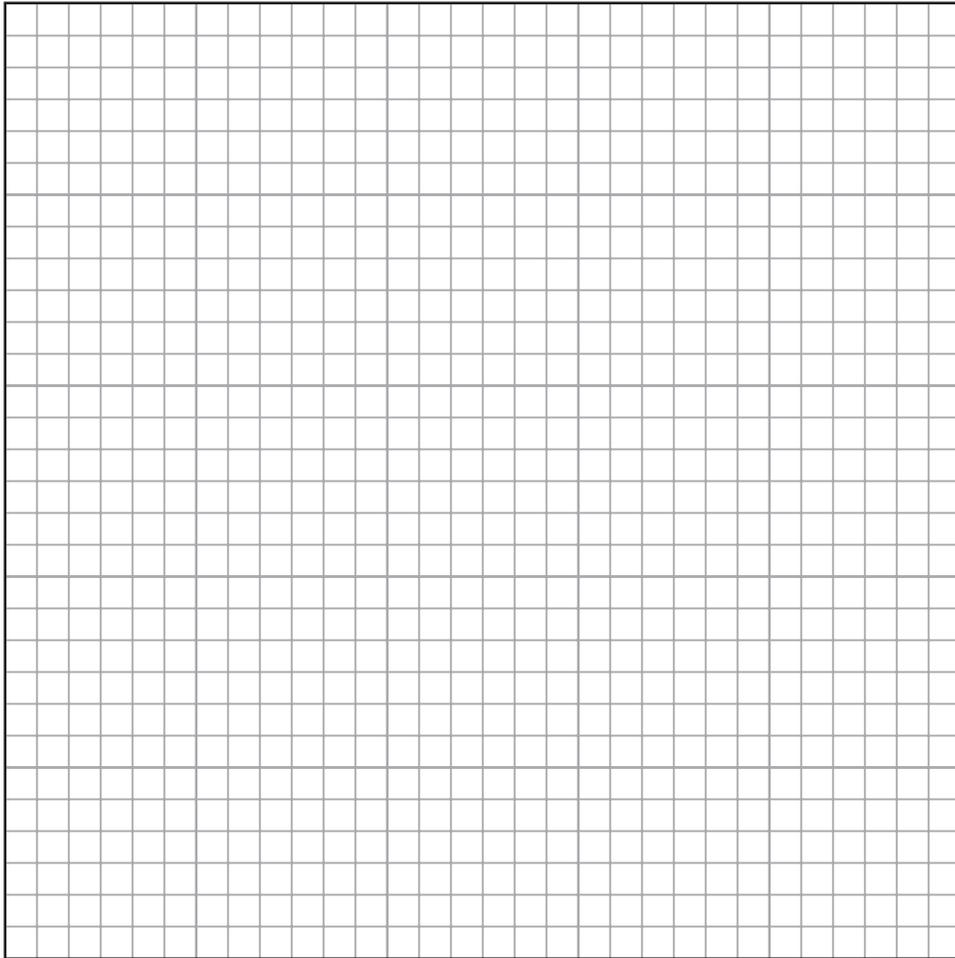
39 Mr. Petri has a rectangular plot of land with length = 20 feet and width = 10 feet. He wants to design a flower garden in the shape of a circle with two semicircles at each end of the center circle, as shown in the accompanying diagram. He will fill in the shaded area with wood chips. If one bag of wood chips covers 5 square feet, how many bags must he buy?
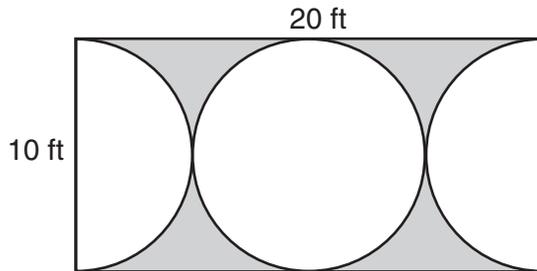
MATHEMATICS A

Tuesday, August 16, 2005 — 8:30 to 11:30 a.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.

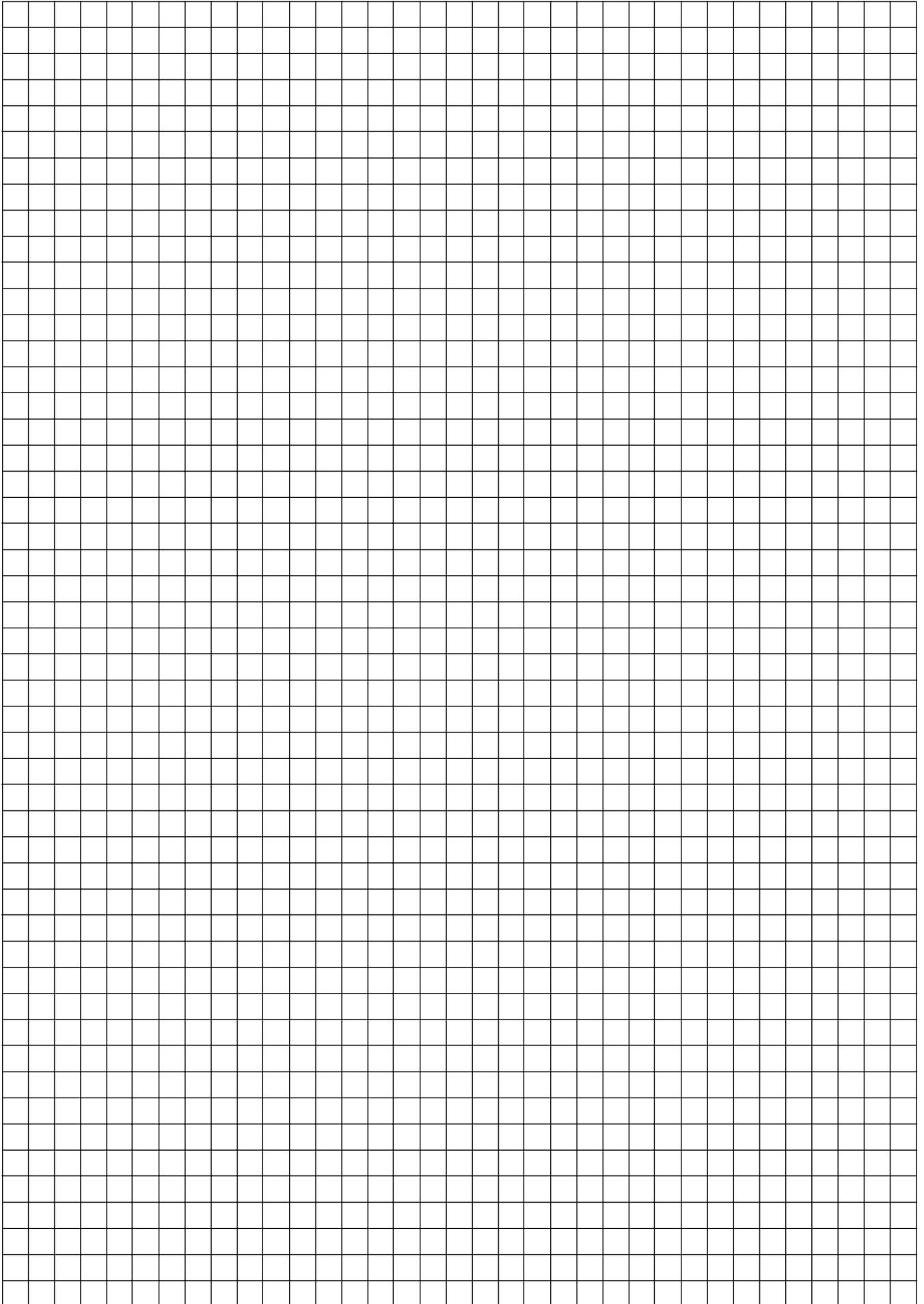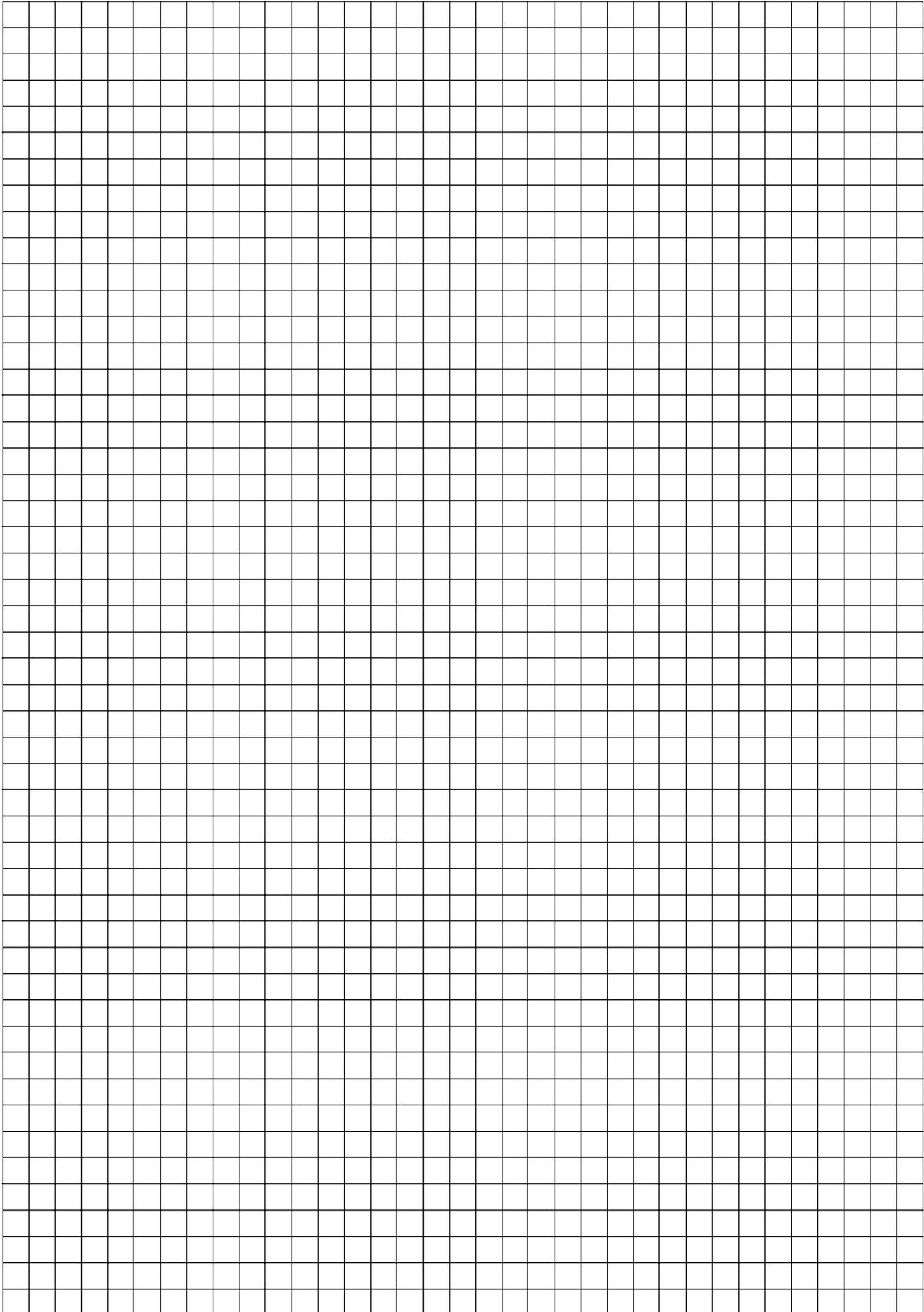|						
1	9	17	25 ....
2	10	18	26 ....
3	11	19	27 ....
4	12	20	28 ....
5	13	21	29 ....
6	14	22	30 ....
7	15	23	
8	16	24	

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

MATHEMATICS A

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

MATHEMATICS A

FOR TEACHERS ONLY

MATHEMATICS A

Tuesday, August 16, 2005 — 8:30 to 11:30 a.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 checkmarks 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 Tuesday, August 16, 2005. 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) 3	(6) 4	(11) 4	(16) 4	(21) 3	(26) 2
(2) 2	(7) 1	(12) 3	(17) 4	(22) 2	(27) 3
(3) 1	(8) 2	(13) 4	(18) 2	(23) 4	(28) 3
(4) 3	(9) 1	(14) 2	(19) 1	(24) 2	(29) 1
(5) 4	(10) 1	(15) 2	(20) 1	(25) 3	(30) 4

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. Visit the site http://www.emsc.nysed.gov/osa/ and select the link "Latest Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and at least one more time before the final scores for the examination are recorded.

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]** 16, and appropriate work is shown, such as the Pythagorean theorem, the Pythagorean triple, or trigonometry.

[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 using an incorrect trigonometric function.

or

[1] 16, 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]** 4, and appropriate work is shown, such as a Venn diagram.

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

or

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

or

[1] 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.

(33)   **[2]** $5(n + 4)(n - 4)$, and appropriate work is shown.

     [1] Appropriate work is shown, but one factoring error is made or the expression is not simplified completely.

     [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]** 600, and appropriate work is shown, such as $\frac{240}{360} \cdot 900 = 600$.

     [1] Appropriate work is shown, but one computational error is made or the answer is expressed as a fraction.

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

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

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

     [1] The central angle of 240° is found, but the number of students is not calculated.

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

     [1] An incorrect equation of equal difficulty is solved appropriately.

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

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

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

     [1] 600, 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]** 1,225, and appropriate work is shown, such as solving an equation or writing an explanation.

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

  or

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

  or

  [1] Appropriate work is shown, but the conversion from years to months is incorrect, but an appropriate solution is found.

  or

  [1] 1,225, 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.

  ———————————————————————————

[OVER]

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]** 45, and appropriate work is shown, such as tan 66° = $\frac{x}{20}$.

   [2] A correct trigonometric ratio is used, and values are substituted correctly, but one computational or rounding error is made, or the calculator is left in radian mode.

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

or

   [1] Appropriate work is shown, but one conceptual error is made, such as using an incorrect trigonometric ratio.

or

   [1] An incorrect diagram is drawn, but an appropriate solution is found.

or

   [1] A correctly labeled diagram is drawn, but no further correct work is shown.

or

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

or

   [1] 45, 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.

(37) **[3]** 18, and appropriate work is shown.

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

or

[2] Appropriate work is shown, and the value of *x* is found, but no further correct work is 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] A correct expression is written for the perimeter of each figure, but no further correct work is shown.

or

[1] 18, 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 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]** (–1,–2) and (2,13), and appropriate work is shown, such as an algebraic or graphic solution or trial and error with at least three trials and appropriate checks.

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

or

[3] Appropriate work is shown, but only one solution is found or only the *x*- or the *y*-values are found.

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

or

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

or

[2] The trial-and-error method is used to find the correct solutions, 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] Both equations are graphed correctly, but neither ordered pair is identified.

or

[2] Only one equation is graphed correctly, but an appropriate solution is found.

or

[2] An incorrect quadratic equation of equal difficulty is solved appropriately, and appropriate solutions are found.

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

or

[1] One equation is graphed correctly, but no further correct work is shown.

or

[1] An incorrect equation of a lesser degree of difficulty, such as a linear equation, is solved appropriately.

or

[8]

[1] A correct substitution is made and the system of equations is simplified to a single quadratic equation set equal to zero, but no further correct work is shown.

or

[1] (–1,–2) and (2,13), but no work or only one trial with an appropriate check is shown.

[0] (–1,–2) *or* (2,13), but no work or only one trial with an appropriate check is shown.

or

[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]** 9, and appropriate work is shown.

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

or

     [3] Appropriate work is shown, and the areas of the rectangle and one circle are found correctly, but the area of the circle is not doubled, but an appropriate number of bags is found.

     [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, such as using an incorrect formula for the area of a circle, but an appropriate number of bags is found.

or

     [2] The areas of the rectangle and the circle are found correctly, 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] 9, 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.

Map to Learning Standards

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

Regents Examination in Mathematics A

August 2005

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

The *Chart for Determining the Final Examination Score for the August 2005 Regents Examination in Mathematics A* will be posted on the Department's web site **http://www.emsc.nysed.gov/osa/** on Tuesday, August 16, 2005. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students' final scores for this administration.

Regents Examination in Mathematics A
August 2005

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

Raw Score	Scaled Score		Raw Score	Scaled Score		Raw Score	Scaled Score
84	100		55	80		27	57
83	99		54	79		26	56
82	98		53	79		25	54
81	98		52	78		24	53
80	97		51	78		23	52
79	96		50	77		22	50
78	95		49	76		21	49
77	94		48	76		20	47
76	94		47	75		19	46
75	93		46	74		18	44
74	92		45	74		17	42
73	91		44	73		16	41
72	90		43	72		15	39
71	90		42	72		14	37
70	89		41	71		13	35
69	88		40	70		12	33
68	88		39	69		11	31
67	87		38	68		10	29
66	86		37	67		9	27
65	86		36	66		8	25
64	85		35	66		7	22
63	84		34	65		6	20
62	84		33	64		5	17
61	83		32	62		4	14
60	83		31	61		3	11
59	82		30	60		2	7
58	82		29	59		1	3
57	81		28	58		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 scaled score that corresponds to that raw score. The scaled score is the student's final examination score. Enter this score in the space labeled "Scaled Score" on the student's answer sheet.

All student answer papers that receive a scaled score of 60 through 64 **must** be scored a second time. 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 scaled scores corresponding to raw scores in the conversion chart may 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 Mathematics A examination.