The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

SPANISH EDITION
MATHEMATICS A
THURSDAY, JANUARY 24, 2008
1:15 TO 4:15 p.m., ONLY

MATEMÁTICAS A

Jueves, 24 de enero de 2008 — 1:15 a 4:15 p.m., solamente

Escriba su nombre en letras de molde:

Escriba el nombre de su escuela en letras de molde:

Escriba su nombre y el nombre de su escuela en los recuadros de arriba en letras de molde. Después, pase a la última página de este folleto, que es la hoja de respuestas para la Parte I. Doble la última página a lo largo de las perforaciones y, lenta y cuidadosamente, desprenda la hoja de respuestas. Después rellene el encabezamiento de su hoja de respuestas.

No se permite papel de borrador para ninguna parte de este examen, pero usted puede usar los espacios en blanco en este folleto como papel de borrador. Una hoja perforada de papel de borrador cuadriculado está provista al final de este folleto para cualquier pregunta para la cual sea útil un gráfico aunque no se requiere. Usted puede remover esta hoja del folleto. Cualquier trabajo que se realice en esta hoja de papel de borrador cuadriculado no será calificado. Todo el trabajo debe realizarse con bolígrafo, menos los gráficos y los dibujos, los cuales deben realizarse con lápiz.

Este examen contiene cuatro partes, con un total de 39 preguntas. Usted debe contestar todas las preguntas de este examen. Escriba sus respuestas para las preguntas de selección múltiple de la Parte I en la hoja separada de respuestas. Escriba sus respuestas a las preguntas de las Partes II, III, y IV en este mismo folleto. Indique claramente los pasos necesarios que usted seguirá, incluyendo las sustituciones apropriadas de fórmulas, diagramas, gráficos, tablas, etc.

Cuando usted haya terminado el examen, debe firmar la declaración impresa al final de la hoja de respuestas, indicando que usted no tenía ningún conocimiento ilegal de las preguntas o de las respuestas antes del examen y que no ha dado ni ha recibido ayuda en contestar ninguna de las preguntas durante el examen. Su hoja de respuestas no puede ser aceptada si usted no firma esta declaración.

Aviso. . .

Un mínimo de una calculadora científica, una regla y un compás tienen que estar disponibles para su uso mientras toma este examen.

El uso de cualquier aparato destinado a la comunicación está estrictamente prohibido mientras esté realizando el examen. Si usted utiliza cualquier aparato destinado a la comunicación, aunque sea brevemente, su examen será invalidado y no se calculará su calificación.

NO ABRA ESTE FOLLETO DE EXAMINACIÓN HASTA QUE SE LE INDIQUE.

Parte I

Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. No se dará crédito parcial. Para cada pregunta, escriba en la hoja separada de respuestas, el número que precede a la palabra o expresión que completa mejor la afirmación o que contesta mejor a la pregunta. [60]

Utilice este espacio para sus cálculos.

1 Robin gastó \$17 en la entrada y en los juegos de un parque de diversiones. Si pagó \$5 por la entrada y los juegos cuestan \$3 cada uno, ¿cuál es la cantidad total de juegos en los que se subió?

(1) 12
(2) 2
(3) 9
(4) 4

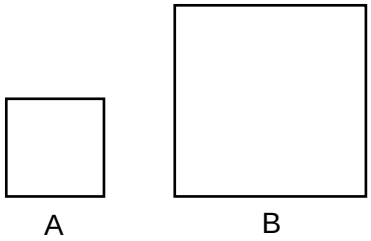
2 Un bloque de madera mide 5 pulgadas de largo, 2 pulgadas de ancho y 3 pulgadas de alto. ¿Cuál es el volumen de este bloque de madera?

(1) 10 pulgadas^3
(2) 25 pulgadas^3
(3) 30 pulgadas^3
(4) 38 pulgadas^3

3 El enunciado "$a > 2$ y $a < 5$" es verdadero cuando a es igual a

(1) 10
(2) 2
(3) 3
(4) 5

4 En el siguiente diagrama, la figura *B* es la imagen de la figura *A*.



¿Qué tipo de transformación se ha efectuado?

(1) expansión
(2) traslación
(3) rotación
(4) reflexión

Utilice este espacio para sus cálculos.

5 Una caja contiene 6 monedas de 10 centavos, 8 monedas de 5 centavos, 12 monedas de 1 centavo y 3 monedas de 25 centavos. ¿Cuál es la probabilidad de que al sacar una moneda al azar *no* sea una de 10 centavos?

(1) $\frac{6}{29}$
(2) $\frac{8}{29}$
(3) $\frac{12}{29}$
(4) $\frac{23}{29}$

6 Si x varía directamente como y, y $x = 8$ cuando $y = 24$, ¿Cuál es el valor de x cuando $y = 6$?

(1) 1
(2) 2
(3) 3
(4) 4

7 ¿Cuál es el valor de p en la ecuación $8p + 2 = 4p - 10$?

(1) 1
(2) –1
(3) 3
(4) –3

8 Una solución para la ecuación $\frac{x^2}{4} = 9$ es

(1) 12
(2) 6
(3) 3
(4) $\frac{3}{2}$

9 ¿Qué transformación produce una figura que es siempre la imagen especular (el reflejo) de la figura original?

(1) reflexión de línea
(2) expansión
(3) traslación
(4) rotación

Utilice este espacio para sus cálculos.

10 Si las medidas, en grados, de los tres ángulos de un triángulo son x, $x + 10$, y $2x - 6$, el triángulo debe ser

(1) isósceles
(2) equilátero
(3) recto
(4) escaleno

11 ¿Qué evento tiene una probabilidad de cero?

(1) escoger una letra del alfabeto que tenga línea de simetría
(2) escoger un número que sea mayor que 6 y sea par
(3) escoger un par de líneas paralelas que tengan pendientes desiguales
(4) escoger un triángulo que sea tanto isósceles como recto

12 ¿Qué propiedad se representa con el enunciado $\frac{1}{2}(6a + 4b) = 3a + 2b$?

(1) conmutativa
(2) distributiva
(3) asociativa
(4) de identidad

13 ¿Qué ecuación expresa la relación entre x e y, como se muestra en la siguiente tabla?

x	0	1	2	3	4
y	2	5	8	11	14

(1) $y = x + 3$
(2) $y = 2x + 3$
(3) $y = 3x + 2$
(4) $y = x + 2$

Utilice este espacio para sus cálculos.

14 ¿Cuáles son los factores de $x^2 - 5x + 6$?

(1) $(x + 2)$ y $(x + 3)$
(2) $(x - 2)$ y $(x - 3)$
(3) $(x + 6)$ y $(x - 1)$
(4) $(x - 6)$ y $(x + 1)$

15 Un periódico escolar hizo una encuesta a 100 estudiantes. Los resultados de la encuesta demostraron que 43 estudiantes son hinchas de los Buffalo Bills, 27 estudiantes son hinchas de los New York Jets y 48 estudiantes no simpatizan con ninguno de los dos equipos. ¿Cuántos estudiantes encuestados son hinchas *tanto* de los Buffalo Bills *como* de los New York Jets?

(1) 16
(2) 18
(3) 52
(4) 70

16 ¿En qué grupo los números están colocados en orden desde el valor más pequeño al valor más grande?

(1) $\pi, 3.14, \sqrt{9.86}, \frac{22}{7}$
(2) $\sqrt{9.86}, \frac{22}{7}, 3.14, \pi$
(3) $\frac{22}{7}, 3.14, \pi, \sqrt{9.86}$
(4) $3.14, \sqrt{9.86}, \pi, \frac{22}{7}$

17 La expresión $\frac{4x^2y^3}{2xy^4}$ es equivalente a

(1) $\frac{2x}{y}$
(2) $\frac{2y}{x}$
(3) $2xy$
(4) $-2xy$

Utilice este espacio para sus cálculos.

18 En un mapa, 1 pulgada representa 3 millas. ¿Cuántas millas de longitud tiene una carretera que en el mapa tiene $2\frac{1}{2}$ pulgadas de longitud?

(1) $\frac{1}{2}$
(2) $5\frac{1}{2}$
(3) $6\frac{1}{2}$
(4) $7\frac{1}{2}$

19 ¿Cuál es el producto de $2r^2 - 5$ y $3r$?

(1) $6r^3 - 15r$
(2) $6r^3 - 5$
(3) $6r^2 - 15r$
(4) $6r^2 - 15$

20 Si x representa un número determinado, la expresión "5 menos que el doble del número determinado" se escribe

(1) $5 < 2x$
(2) $5 < 2 + x$
(3) $2x - 5$
(4) $5 - 2x$

21 El inverso aditivo de $\frac{1}{a}$ es

(1) $-\frac{1}{a}$
(2) $-a$
(3) 0
(4) a

22 ¿Para qué valor de x la expresión $\frac{6 - x}{x + 2}$ es indefinida?

(1) –2
(2) 2
(3) 0
(4) 6

Utilice este espacio para sus cálculos.

23 Dos ángulos son complementarios. La medida de un ángulo es 15° más que el doble del otro. ¿Cuál es la medida del ángulo *más pequeño*?

(1) 25°
(2) 35°
(3) 55°
(4) 65°

24 El mayor de dos enteros consecutivos está representado por $x + 4$. ¿Qué expresión representa al entero *más pequeño*?

(1) $x + 2$
(2) $x + 3$
(3) $x + 5$
(4) $x + 6$

25 Si $\frac{5}{n} - \frac{1}{2} = \frac{3}{6n}$, ¿cuál es el valor de n?

(1) -2
(2) 2
(3) 9
(4) $\frac{2}{7}$

26 La expresión $\sqrt{28} - \sqrt{7}$ es equivalente a

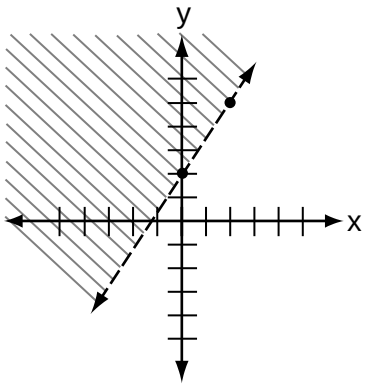
(1) $\sqrt{7}$
(2) 2
(3) $3\sqrt{7}$
(4) 4

27 ¿Qué conjunto de números podría ser las longitudes de los lados de un triángulo recto?

(1) {10,24,26}
(2) {12,16,30}
(3) {3,4,6}
(4) {4,7,8}

Utilice este espacio para sus cálculos.

28 ¿Qué desigualdad se muestra en el siguiente diagrama?



(1) $y > \frac{3}{2}x + 2$

(2) $y < \frac{3}{2}x + 2$

(3) $y \geq \frac{3}{2}x + 2$

(4) $y \leq \frac{3}{2}x + 2$

29 ¿Cuál es el número total de diferentes arreglos de siete letras que pueden formarse usando las letras de la palabra "MILLION"?

(1) 30

(2) 210

(3) 1,260

(4) 2,520

30 El lugar geométrico de los puntos equidistantes de los puntos (4, –5) y (4,7) es la línea cuya ecuación es

(1) $y = 1$

(2) $y = 2$

(3) $x = 1$

(4) $x = 4$

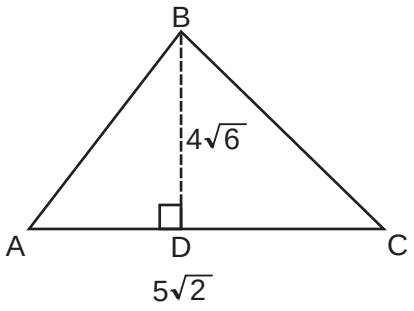
Parte II

Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficos, tablas, etc. Para todas las preguntas de esta parte, una respuesta numérica correcta que no demuestre el trabajo, recibirá solamente 1 punto. [10]

31 La circunferencia de un círculo mide 22π unidades. Encuentre el número de unidades cuadradas en el área del círculo. Use π para expresar su respuesta.

32 Como capitán de su equipo de fútbol, Jamal tiene la oportunidad de escoger cara o cruz cuando se tira la moneda al comienzo de cada partido. En los últimos tres partidos, la moneda ha caído del lado cara. ¿Cuál es la probabilidad de que la moneda caiga del lado cara en el próximo partido? Explique su respuesta.

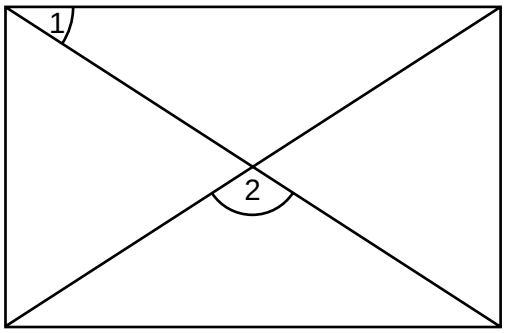
33 En el siguiente diagrama de ABC, la altitud $BD = 4\sqrt{6}$ y $AC = 5\sqrt{2}$. Encuentre el área del triángulo a la *décima más cercana de una unidad cuadrada*.



(No está dibujado a escala)

34 Escriba una ecuación de una línea que sea perpendicular a la línea $y = \frac{2}{3}x + 5$ y que pase por el punto (0,4).

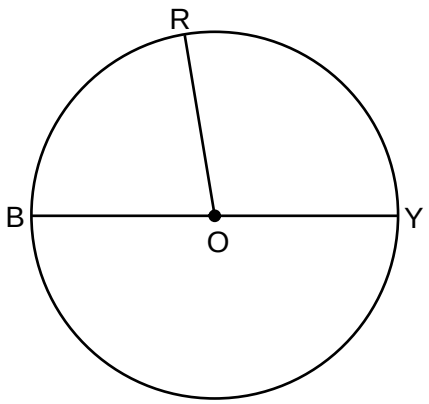
35 Como se muestra en el siguiente diagrama, una puerta rectangular tiene dos soportes diagonales. Si m∠1 = 42, ¿a qué equivale m∠2?



Parte III

Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 3 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficos, tablas, etc. Para todas las preguntas de esta parte, una respuesta numérica correcta que no demuestre el trabajo, recibirá solamente 1 punto. [6]

36 En el siguiente diagrama, $\overline{BY}$ es el diámetro del círculo O, la medida del ángulo central ROY es $(x + 60)°$, y la medida del ángulo central ROB es $(3x - 20)°$. Encuentre el número de grados en la medida del ángulo central ROY.



37 En los espacios que se proporcionan a continuación, escriba el converso, el inverso y el contrapositivo del enunciado "Si corro, entonces estoy cansado".

Converso: _____

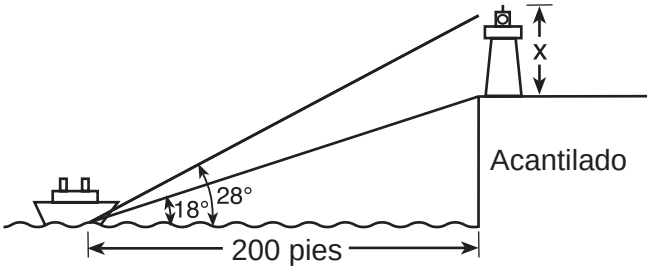
Inverso: _____

Contrapositivo: _____

Parte IV

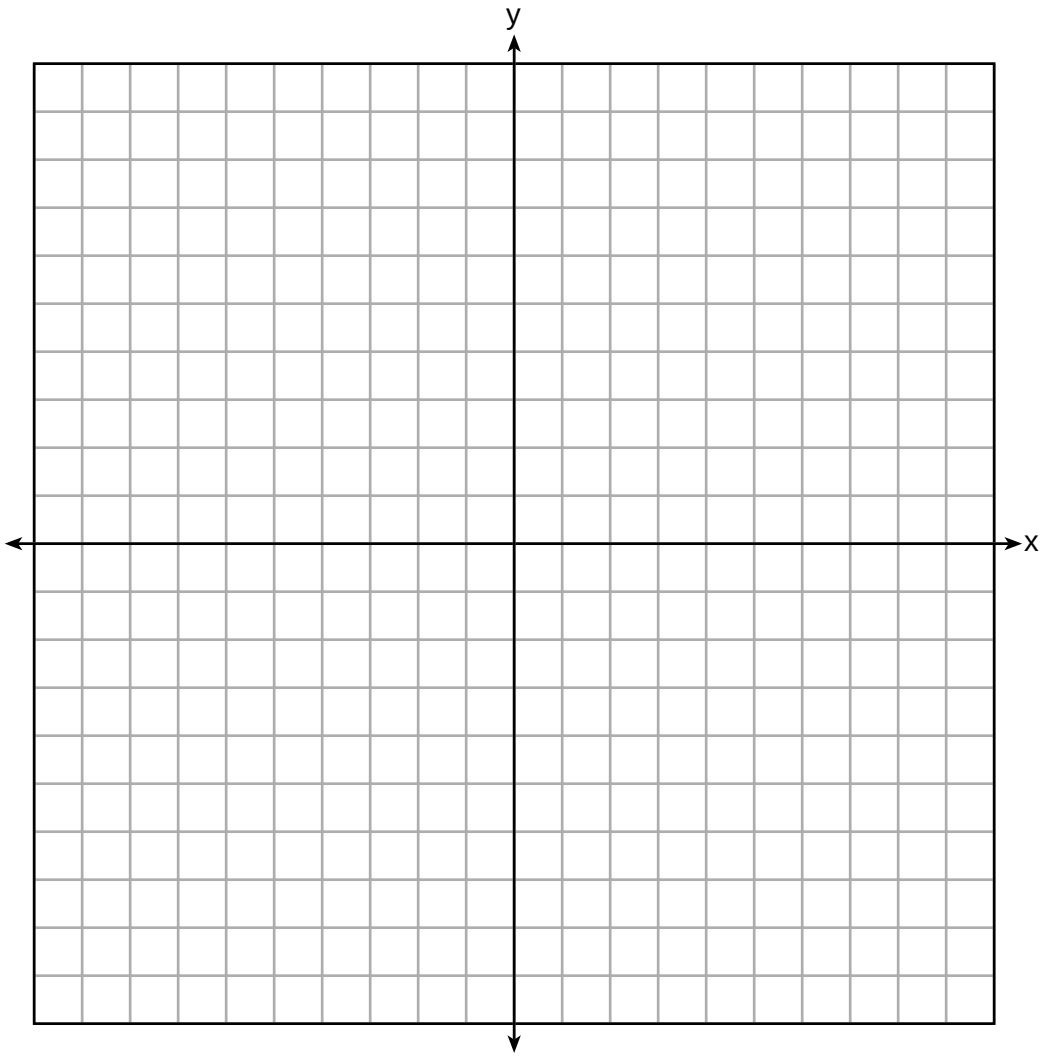
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 4 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficos, tablas, etc. Para todas las preguntas de esta parte, una respuesta numérica correcta que no demuestre el trabajo, recibirá solamente 1 punto. [8]

38 Un faro está construido al borde de un acantilado cerca del océano, como se muestra en el siguiente diagrama. Desde un barco ubicado a 200 pies de la base del acantilado, el ángulo de elevación hacia la parte superior del acantilado es 18° y el ángulo de elevación hacia la parte superior del faro es 28°. ¿Cuál es la altura del faro, *x*, a la *décima más cercana de un pie*?



39 En el siguiente conjunto de ejes, grafique la parábola cuya ecuación sea $y = x^2 - 2x - 8$ sobre el intervalo $-3 \leq x \leq 5$ y grafique el círculo cuyo centro se encuentre a (1, –5) y cuyo radio sea 4.

Utilizando sus gráficos, determine cuántos puntos de intersección tienen los dos gráficos.



Desprender por la línea perforada

Desprender por la línea perforada

Papel borrrador cuadriculado — Esta hoja *no* será calificada.

Papel borrrador cuadriculado — Esta hoja *no* será calificada.

Desprender por la línea perforada

Desprender por la línea perforada

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATEMÁTICAS A

Jueves, 24 de enero de 2008 — 1:15 a 4:15 p.m., solamente

HOJA DE RESPUESTAS

Estudiante . . . . . Sexo: ☐ Masculino ☐ Femenino Grado . . . .

Profesor . . . . . Escuela . . . . . .

Sus respuestas para la Parte I debe apuntarlas en esta hoja de respuestas.

Parte I

Conteste todas las 30 preguntas de esta parte.

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	

Sus respuestas para las Partes II, III, y IV deben escribirse en el folleto del examen.

La declaración de abajo debe ser firmada cuando usted haya completado el examen.

Al terminar este examen declaro no haber tenido conocimiento ilegal previo sobre las preguntas del mismo o sus respuestas. Declaro también que durante el examen no di ni recibí ayuda para responder a las preguntas.

Firma

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**		

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

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

Desprender por la línea perforada

Desprender por la línea perforada

MATHEMATICS A

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Thursday, January 24, 2008 — 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 24, 2008. 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) 4	(6) 2	(11) 3	(16) 4	(21) 1	(26) 1
(2) 3	(7) 4	(12) 2	(17) 1	(22) 1	(27) 1
(3) 3	(8) 2	(13) 3	(18) 4	(23) 1	(28) 1
(4) 1	(9) 1	(14) 2	(19) 1	(24) 2	(29) 3
(5) 4	(10) 4	(15) 2	(20) 3	(25) 3	(30) 1

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]** 121π, 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.

or

[1] Appropriate work is shown, but the answer is expressed as a decimal.

or

[1] The radius of the circle is found, but no further correct work is shown.

or

[1] 121π, 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]** $\frac{1}{2}$ or an equivalent answer, and an appropriate explanation is written.

[1] A correct explanation is written, but the probability is not stated.

or

[1] $\frac{1}{2}$ or an equivalent answer, but no explanation is written.

[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]** 34.6, 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, such as using an incorrect area formula.

or

[1] Appropriate work is shown, but the answer is left in radical form.

or

[1] 34.6, 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]** A correct equation is written, such as $y = -\frac{3}{2}x + 4$ or $(y - 4) = -\frac{3}{2}(x - 0)$.

[1] An appropriate equation is written, but one computational error is made or one incorrect substitution is made.

or

[1] An appropriate equation is written, but one conceptual error is made, such as writing an equation for a parallel line going through (0,4) or for a perpendicular line that does not go through (0,4).

or

[1] The slope is identified correctly as $-\frac{3}{2}$ or the y-intercept as 4, but no equation or an incorrect equation is written.

[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]** 96, and appropriate work is shown, such as an algebraic solution or a correctly labeled 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] 96, 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]** 95, and appropriate work is shown, such as $3x - 20 + x + 60 = 180$.

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

or

[2] A correct equation is written and solved for x, but $m\angle ROY$ is not found.

[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, such as writing the equation $x + 60 = 3x - 20$, but an appropriate answer is found.

or

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

or

[1] 95, 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]** Three correct statements are written for the converse, the inverse, and the contrapositive.

[2] Two correct statements are written.

[1] One correct statement is written.

[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]** 41.4, and appropriate work is shown, such as 200 tan 28° – 200 tan 18°.

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

or

[3] Appropriate work is shown to find the correct height of the cliff and the correct combined height of the lighthouse and the cliff, but they are not subtracted.

[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 trigonometric function.

or

[2] Appropriate work is shown to find the correct height of the cliff or the correct combined height of the lighthouse and the cliff, 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] A correct equation is written to find the height of the lighthouse, but no further correct work is shown.

or

[1] 41.4, but no work is shown.

[0] The correct height of the cliff *or* the correct combined height of the lighthouse and cliff is found, but no work 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]** Both the parabola and the circle are graphed correctly and the number of points of intersection is stated as three.

[3] Appropriate work is shown, but one graphing error is made, but an appropriate number of points of intersection is stated.

or

[3] Both graphs are drawn correctly, but the number of points of intersection is missing or is incorrect.

[2] Appropriate work is shown, but two or more graphing errors are made, but an appropriate number of points of intersection is stated.

[1] Both graphs are drawn incorrectly, but an appropriate number of points of intersection is stated.

or

[1] Either the parabola or the circle is graphed correctly, but no further correct work is shown.

or

[1] Three points of intersection, but no work is shown and no graphs are drawn.

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

Regents Examination in Mathematics A

January 2008

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

The *Chart for Determining the Final Examination Score for the January 2008 Regents Examination in Mathematics A* will be posted on the Department's web site http://www.emsc.nysed.gov/osa/ on Thursday, January 24, 2008. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students' final scores for this administration.

Submitting 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.

University of the State of New York
State Education Department

Regents Examination in Mathematics A
January 2008

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

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 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.