The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

SPANISH EDITION
MATHEMATICS A
Thursday, June 19, 2008
1:15 to 4:15 p.m., only

MATEMÁTICAS A

Jueves, 19 de junio 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 EXAMEN HASTA QUE SE LE INDIQUE.

Parte I

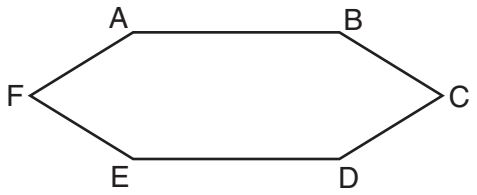
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. No se dará crédito parcial. Para cada pregunta, escriba en la hoja separada de respuestas, el número que precede a la palabra o expresión que completa mejor la afirmación o que contesta mejor a la pregunta. [60]

Utilice este espacio para sus cálculos.

1 El segmento *RS* es paralelo al segmento *TU*. Si la pendiente de $\overline{RS} = \frac{5}{8}$ y la pendiente de $\overline{TU} = \frac{x}{24}$, el valor de x es

(1) 20
(2) 15
(3) 10
(4) 5

2 ¿Qué tipo de figura se muestra en el siguiente diagrama?



(1) hexágono
(2) octágono
(3) pentágono
(4) cuadrilátero

3 En una competencia musical para todos los condados, participaron 150 estudiantes. Si 90 estudiantes cantaron en el coro y 90 tocaron en la banda, ¿cuántos estudiantes hicieron *ambos*, cantar en el coro y tocar en la banda?

(1) 0
(2) 30
(3) 60
(4) 240

4 ¿Cuál es el valor de w en la ecuación $0.04w + 0.6 = 2.4$?

(1) 0.045
(2) 0.45
(3) 4.5
(4) 45

Utilice este espacio para sus cálculos.

5 ¿Cuál es la suma de $x^2 - 3x + 7$ y $3x^2 + 5x - 9$?

(1) $4x^2 - 8x + 2$
(2) $4x^2 + 2x + 16$
(3) $4x^2 - 2x - 2$
(4) $4x^2 + 2x - 2$

6 Si $2n + 1$ representa un entero impar, el siguiente entero impar mayor está representado por

(1) $2n + 3$
(2) $2n + 2$
(3) $2n$
(4) $2n - 1$

7 ¿Cuál es el valor de la expresión $2x^3y$ cuando $x = -2$ e $y = 3$?

(1) −192
(2) −108
(3) −48
(4) 48

8 Si se expresa en notación científica, el número 4,600,000,000 es

(1) 4.6×10^{-8}
(2) 4.6×10^{-9}
(3) 4.6×10^{9}
(4) 0.46×10^{10}

9 En una tienda por departamentos, hay seis maneras de entrar al edificio, seis maneras de ir del primer piso al segundo piso y cuatro maneras de ir del segundo piso al tercer piso. ¿De cuántas maneras distintas podría entrar alguien al edificio e ir al tercer piso?

(1) 16
(2) 24
(3) 120
(4) 144

Utilice este espacio para sus cálculos.

10 ¿Cuál es el valor de x en la ecuación $5 - 3x = -7$?

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

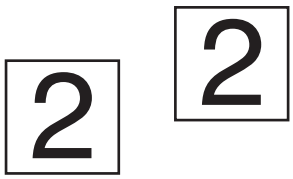
(2) $\frac{2}{3}$ (4) 4

11 ¿Qué expresión es equivalente a $7\sqrt{90}$?

(1) $16\sqrt{10}$ (3) $70\sqrt{9}$

(2) $21\sqrt{10}$ (4) $\sqrt{630}$

12 ¿Qué transformación se ilustra en el siguiente diagrama?



(1) traslación (3) rotación

(2) reflexión (4) expansión

13 Si $3(x + 2) - 2(x + 1) = 8$, el valor de x es

(1) 1 (3) 5

(2) $\frac{1}{5}$ (4) 4

14 Una expresión equivalente a 3! es

(1) $3 \bullet 3$ (3) $3 \bullet 3 \bullet 3$

(2) $3 \bullet 2 \bullet 1$ (4) -3

Utilice este espacio para sus cálculos.

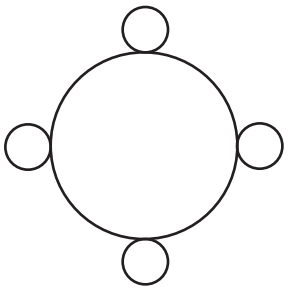
15 El recíproco de 5 es

(1) 1
(2) $\frac{1}{5}$
(3) $-\frac{1}{5}$
(4) –5

16 ¿Cuál es el converso de una frase "Si x es un entero par, entonces $(x + 1)$) es un entero impar"?

(1) x no es un entero par si, y sólo si $(x + 1)$ no es un entero impar.
(2) x es un entero par si, y sólo si $(x + 1)$ no es un entero impar.
(3) Si $(x + 1)$ no es un entero impar, entonces x no es un entero par.
(4) Si $(x + 1)$ es un entero impar, entonces x es un entero par.

17 ¿Cuántas líneas de simetría tiene la siguiente figura?



(1) un número infinito
(2) 2
(3) 8
(4) 4

18 Las dimensiones de un rectángulo son 4 y 16. ¿Cuál es el valor integral *más pequeño* que podría ser el lado de un cuadrado que tiene un área más grande que la del rectángulo?

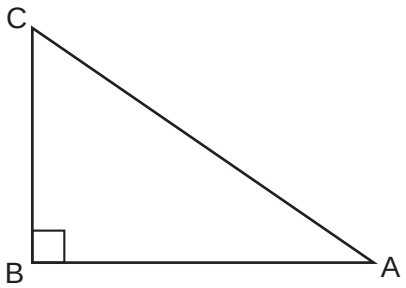
(1) 8
(2) 9
(3) 64
(4) 81

Utilice este espacio para sus cálculos.

19 El ángulo A y el ángulo B son ángulos complementarios. Si $m\angle A = x$, ¿qué expresión representa el número de grados en el ángulo B?

(1) $x - 180$
(2) $180 - x$
(3) $x - 90$
(4) $90 - x$

20 Cassandra calcula la medida del ángulo A del triángulo recto ABC, como se muestra en el siguiente diagrama. Ella conoce las longitudes de $\overline{AB}$ y $\overline{BC}$.



Si ella encuentra la medida del ángulo A resolviendo sólo una ecuación, ¿qué concepto usará en sus cálculos?

(1) teorema de Pitágoras
(2) sen A
(3) cos A
(4) tan A

21 La probabilidad de que el autobús de Jinelle esté a su hora es $\frac{2}{3}$, y la probabilidad de que el Sr. Corney esté conduciendo el autobús es $\frac{4}{5}$. ¿Cuál es la probabilidad de que en cualquier día determinado el autobús de Jinelle esté a su hora y que el Sr. Corney sea el conductor?

(1) $\frac{2}{15}$
(2) $\frac{8}{15}$
(3) $\frac{10}{12}$
(4) $\frac{6}{8}$

Utilice este espacio para sus cálculos.

22 ¿Cuál es el punto medio del segmento lineal que une los puntos (4,–2) y (–2,5)?

(1) $\left(1, \frac{3}{2}\right)$ (3) $\left(1, \frac{7}{2}\right)$

(2) $\left(\frac{3}{2}, 3\right)$ (4) $\left(2, \frac{3}{2}\right)$

23 Un enunciado condicional es siempre lógicamente equivalente a su

(1) contrapositivo (3) conjunción

(2) converso (4) inverso

24 Si $x + y = -10$ y $x - y = 2$, ¿cuál es el valor de x?

(1) –6 (3) –4

(2) 6 (4) 4

25 El punto (–2,3) se refleja en el eje x. ¿En qué cuadrante yace su imagen?

(1) I (3) III

(2) II (4) IV

26 La expresión $(3c)^{-2}$ es equivalente a

(1) $-6c^2$ (3) $\frac{1}{9c^2}$

(2) $\frac{1}{3c^2}$ (4) $\frac{3}{c^2}$

Utilice este espacio para sus cálculos.

27 ¿Qué propiedad se ilustra con la ecuación $6 + (4 + x) = 6 + (x + 4)$?

(1) propiedad asociativa de la suma
(2) propiedad asociativa de la multiplicación
(3) propiedad distributiva
(4) propiedad conmutativa de la suma

28 ¿Bajo qué operación es cerrado el conjunto $\{-1,0,1\}$?

(1) multiplicación
(2) división
(3) suma
(4) resta

29 La siguiente tabla representa el número de minutos de teléfono celular que usaron 23 usuarios en una semana.

Número de minutos	Número de usuarios
71–80	10
61–70	7
51–60	2
41–50	3
31–40	1

¿Qué intervalo contiene la mediana?

(1) 41–50
(2) 51–60
(3) 61–70
(4) 71–80

30 Si la longitud del lado de un cubo es $7x$, ¿qué expresión representa el volumen del cubo?

(1) $7x^3$
(2) $49x^3$
(3) $343x$
(4) $343x^3$

Parte II

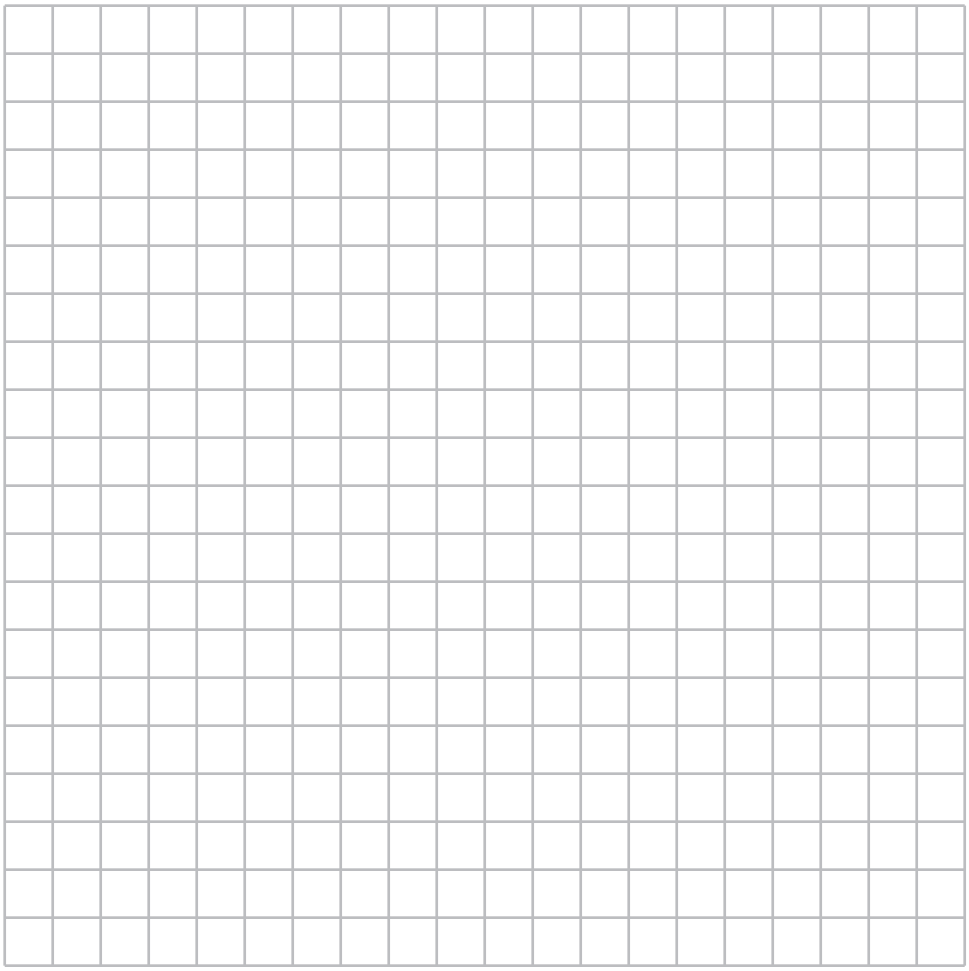
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficos, tablas, etc. Para todas las preguntas de esta parte, una respuesta numérica correcta que no demuestre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

31 Samuel está comprando un automóvil nuevo. Él quiere un convertible o uno con puerta trasera (hatchback). Ambos tipos de automóviles están disponibles en rojo, blanco o azul y con transmisión automática o mecánica. Dibuje un diagrama de árbol o enumere un espacio muestral de todas las opciones posibles de automóviles que están disponibles.

32 Una escalera que mide 18 pies de altura está apoyada contra la pared de un edificio. La base de la escalera está a 9 pies del edificio, sobre el nivel del suelo. ¿A qué altura en la pared, al *décimo de pie más cercano*, está la parte superior de la escalera?

33 Kimberly monta su bicicleta desde su casa a la escuela a una velocidad promedio de 12 millas por hora. Si le toma 20 minutos llegar a la escuela, ¿a cuántas millas está su casa de su escuela?

34 En la siguiente cuadrícula, dibuje el gráfico de la línea cuya pendiente es $\frac{2}{3}$ y cuyo intercepto y es –2.



35 Escriba los siguientes números en orden del menor valor al mayor valor:

$$\sqrt{3},\ 1\frac{2}{3},\ \frac{3}{2},\ 1.75,\ 1$$

Justifique su respuesta.

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 A Max se le paga un sueldo de $225 a la semana más 2.5% de comisión por sus ventas totales.

Escriba una ecuación para P, el pago de Max por una semana, en términos de T, sus ventas semanales totales.

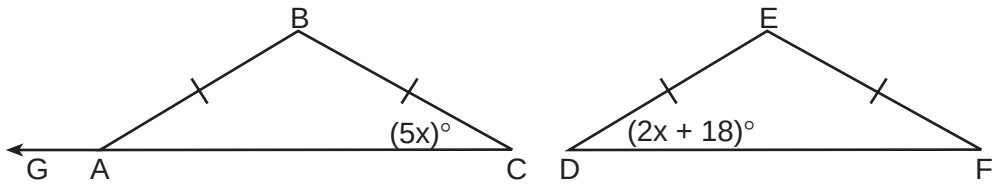
Use esta ecuación para determinar su pago total durante una semana en la que sus ventas totales son $4,650.

37 Exprese en su forma más simple:: $\dfrac{x^2 - 5x - 24}{x^2 - 8x}$

Parte IV

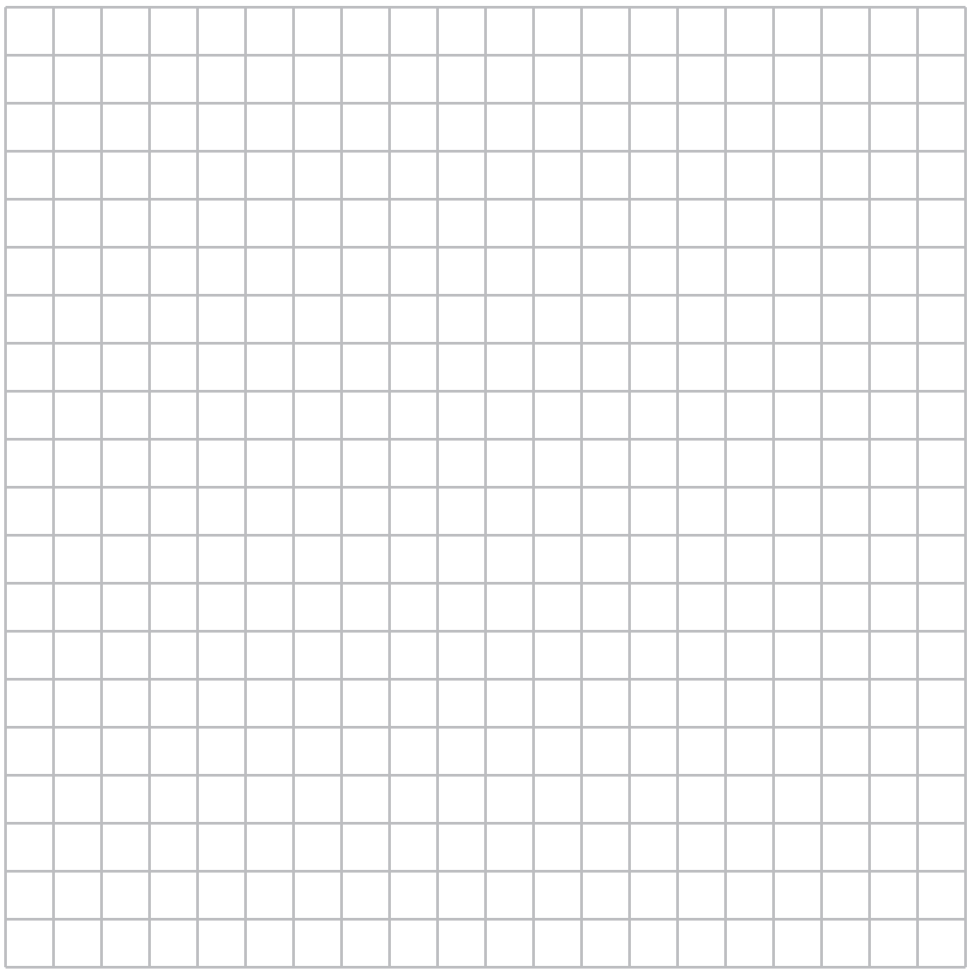
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 4 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficos, tablas, etc. Para todas las preguntas de esta parte, una respuesta numérica correcta que no demuestre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

38 En el siguiente diagrama, el Δ isósceles $ABC \cong \Delta$ isósceles DEF, $m\angle C = 5x$, y $m\angle D = 2x + 18$. Encuentre $m\angle B$ y $m\angle BAG$.



39 Resuelva el siguiente sistema de ecuaciones algebraica o gráficamente para x e y:

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



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

Desprender por la línea perforada

Desprender por la línea perforada

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

Desprender por la línea perforada

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Desprender por la línea perforada

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATEMÁTICAS A

Jueves, 19 de junio 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

Desprender por la línea perforada

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)

Desprender por la línea perforada

Desprender por la línea perforada

MATHEMATICS A SPANISH EDITION

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Thursday, June 19, 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, June 19, 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) 2	(6) 1	(11) 2	(16) 4	(21) 2	(26) 3
(2) 1	(7) 3	(12) 1	(17) 4	(22) 1	(27) 4
(3) 2	(8) 3	(13) 4	(18) 2	(23) 1	(28) 1
(4) 4	(9) 4	(14) 2	(19) 4	(24) 3	(29) 3
(5) 4	(10) 4	(15) 2	(20) 4	(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. 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]** A complete and correct tree diagram or sample space is shown.

[1] A tree diagram or sample space is shown, but one error is made.

[0] A tree diagram or sample space is shown, but two or more errors are made.

or

[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]** 15.6, 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.

or

[1] 15.6, 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.

(33) **[2]** 4, and appropriate work is shown, such as using the formula $rt = d$ or trial and error with at least three trials and appropriate checks.

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

or

[1] 4, but no work or fewer than three trials with appropriate checks are 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 graph is drawn that passes through the points (0,–2) and (3,0).

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

or

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

or

[1] At least two points that are on the line are plotted, but no graph is drawn.

[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]** $1,\ \frac{3}{2},\ 1\frac{2}{3},\ \sqrt{3},\ 1.75$, and an appropriate justification is given, such as work that shows all the given numbers converted to decimals.

[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 listing the numbers from largest to smallest.

or

[1] An equivalent decimal value is found for all the numbers, but the numbers are not listed or are listed incorrectly.

or

[1] $1,\ \frac{3}{2},\ 1\frac{2}{3},\ \sqrt{3},\ 1.75$, 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]** A correct equation is written, such as $P = 225 + 0.025T$, and 341.25, and appropriate work is shown.

[2] A correct equation is written and appropriate work is shown, but one computational error is made.

or

[2] Appropriate work is shown to find the correct total pay, but no equation is written.

[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 using $P = 225 + 0.25T$.

or

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

or

[1] 341.25, but no work is shown and no 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.

(37) **[3]** $\frac{x+3}{x}$ or $1+\frac{3}{x}$, and appropriate work is shown.

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

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

or

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

or

[1] $\frac{x+3}{x}$ or $1+\frac{3}{x}$, 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]** $m\angle B = 120$ and $m\angle BAG = 150$, and appropriate work is shown.

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

or

[3] Appropriate work is shown, but only $m\angle B$ or $m\angle BAG$ is found.

or

[3] Appropriate work is shown, and the correct answers are found, but they are not labeled or are labeled incorrectly.

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

or

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

or

[2] Appropriate work is shown to find $x = 6$, but no further correct work is shown.

[1] $5x = 2x + 18$ is written, but no further correct work is shown.

or

[1] $m\angle B = 120$ and $m\angle BAG = 150$, but no work is shown.

[0] $m\angle B = 120$ *or* $m\angle BAG = 150$, 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]** (1,0) and (4,3), and appropriate work is shown, such as an algebraic or a graphic solution.

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

or

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

or

[3] Both equations are graphed correctly showing two points of intersection, but the coordinates of the solutions are not written or only one is written.

[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, such as failing to extend the line or the parabola to intersect at a second point.

or

[2] The system of equations is written as $x^2 - 5x + 4 = 0$, but no further correct work is shown.

or

[2] The equation $y = x^2 - 4x + 3$ is graphed correctly, but no further correct work is shown.

or

[2] (1,0) and (4,3), but a method other than an algebraic or graphic solution is used, such as trial and error with at least three trials and appropriate checks.

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

or

[1] The equation $y = x - 1$ is graphed correctly, but no further correct work is shown.

or

[1] A correct substitution results in $x - 1 = x^2 - 4x + 3$, but no further correct work is shown.

or

[1] (1,0) and (4,3), but no algebraic or graphic work is shown or the trial-and-error method is used and fewer than three trials and appropriate checks are shown.

or

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

or

[1] (1,0) and (4,3), but no work is shown.

[0] (1,0) *or* (4,3), 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.

Map to Learning Standards

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

Regents Examination in Mathematics A

June 2008

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

The *Chart for Determining the Final Examination Score for the June 2008 Regents Examination in Mathematics A* will be posted on the Department's web site http://www.emsc.nysed.gov/osa/ on Thursday, June 19, 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
June 2008

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

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. 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.