SPANISH EDITION
MATHEMATICS A
THURSDAY, JUNE 16, 2005
1:15 TO 4:15 p.m. ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATEMÁTICAS A

Jueves, 16 de Junio, 2005 — 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 una gráfica aunque no se requiere. Cualquier trabajo que se realice en esta hoja de papel de borrador cuadriculado no será calificado. Todo el trabajo debe realizarse con bolígrafo, menos las gráficas y los dibujos, los cuales deben realizarse con lapiz.

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, gráficas, 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 exámen.

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 DÉ LA SEÑAL.

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 de respuestas separada, el número que precede la palabra o expresión que completa mejor la afirmación o que contesta mejor la pregunta.

Use este espacio para sus cómputos.

1 El dormitorio de Jeremy tiene dos puertas que dan al vestíbulo. Su casa tiene cuatro puertas que dan al exterior. Utilizando las puertas de entrada ¿de cuántas formas diferentes puede Jeremy dejar su habitación y salir al exterior?

(1) 8
(2) 6
(3) 5
(4) 4

2 La cantidad de tiempo en segundos, t, que le toma a un objeto caer de una distancia, d, en metros, se expresa mediante la formula $t = \sqrt{\frac{d}{4.9}}$. Aproximadamente ¿cuánto le tomará a un objeto caer 75 metros?

(1) 0.26 seg
(2) 2.34 seg
(3) 3.9 seg
(4) 7.7 seg

3 ¿Cuál ecuación ilustra la propiedad distributiva?

(1) $5(a + b) = 5a + 5b$
(2) $a + b = b + a$
(3) $a + (b + c) = (a + b) + c$
(4) $a + 0 = a$

4 La masa de una semilla de orquídea es de aproximadamente 0.0000035 gramo. Escrito en notación científica, la masa es igual a 3.5×10^n. ¿Cuál es el valor de n?

(1) –8
(2) –7
(3) –6
(4) –5

5 La receta de una torta indica que se necesitan 1.5 tazas de leche y 3 tazas de harina. Seth se equivocó y utilizó 5 tazas de harina. ¿Cuántas tazas de leche debería utilizar para mantener correctas las proporciones?

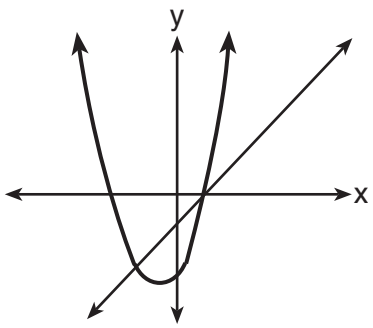
(1) 1.75
(2) 2
(3) 2.25
(4) 2.5

6 Cuando $3x^2 - 6x$ se divide por $3x$, el resultado es

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

Use este espacio para sus cómputos.

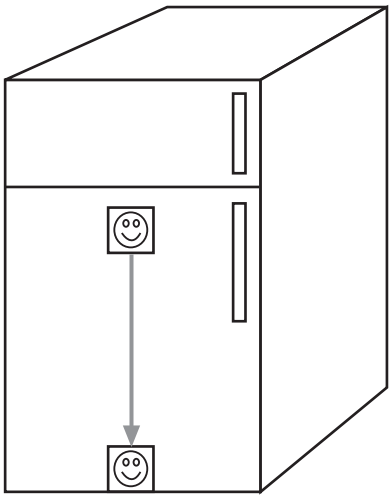
7 El siguiente diagrama muestra los gráficos de una ecuación lineal y de una ecuación cuadrática.



¿Cuántas soluciones existen para este sistema de ecuaciones?

(1) 1
(2) 2
(3) 3
(4) 0

8 Una fotografía sujetada por un imán al refrigerador se desliza hasta la parte baja del mismo, como se muestra en el siguiente diagrama.



Este cambio de posición es un ejemplo de

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

9 Jorge hizo el siguiente diagrama de tallo y hoja de los pesos, en libras, de cada uno de los miembros del equipo de lucha al que estaba entrenando.

Use este espacio para sus cómputos.

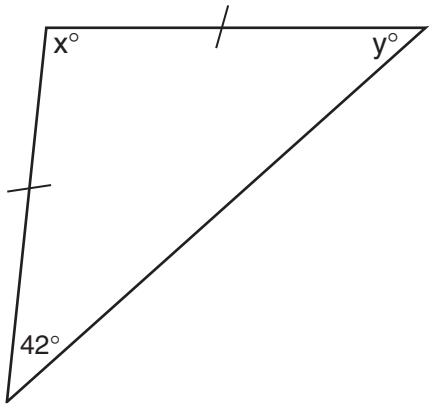
Tallo	Hoja						
10	9						
11							
12	3	8					
13	2	4	4	6	8		
14	1	3	5	5	9		
15	2	3	7	7	9		
16	1	3	7	8	8	8	9
17	3	8					

Clave: 16 | 1 = 161

¿Cuál es el modo de los pesos?

(1) 145
(2) 150
(3) 152
(4) 168

10 Tina quiere coser un pedazo de tela para convertirlo en una bufanda con forma de triángulo isósceles, como se muestra en el diagrama siguiente.



¿Cuáles son los valores de x e y?

(1) $x = 42$ e $y = 96$
(2) $x = 69$ e $y = 69$
(3) $x = 90$ e $y = 48$
(4) $x = 96$ e $y = 42$

11 La expresión $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$ es equivalente a

(1) $7x^2 - 12x - 5$
(2) $7x^2 - 2x + 1$
(3) $7x^2 + 2x + 1$
(4) $7x^2 + 2x - 5$

12 La expresión $\sqrt{50} + \sqrt{32}$ es equivalente a

(1) $9\sqrt{2}$ (3) 6

(2) $\sqrt{82}$ (4) 18

Use este espacio para sus cómputos.

13 Si $7x + 2a = 3x + 5a$, entonces x es equivalente a

(1) $\frac{7a}{10}$ (3) $\frac{3a}{10}$

(2) $\frac{7a}{4}$ (4) $\frac{3a}{4}$

14 ¿Qué conjunto es la solución de la ecuación $x^2 + 11x + 28 = 0$?

(1) {–7,4} (3) {3,4}

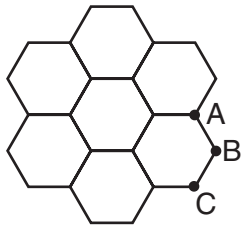
(2) {–7,–4} (4) {–3,–4}

15 ¿Qué conjunto *no* podría representar las longitudes de los lados de un triángulo?

(1) {3,4,5} (3) {5,10,12}

(2) {2,5,9} (4) {7,9,11}

16 La siguiente figura representa una sección de las baldosas de un cuarto de baño con forma de hexágonos regulares.



¿Cuál es la medida del ángulo ABC?

(1) 60° (3) 120°

(2) 90° (4) 150°

17 La afirmación "Si x es un número primo, entonces es impar" es *falsa* cuando x es igual a

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

Use este espacio para sus cómputos.

18 Si $x \neq 0$, entonces $\frac{\left(x^2\right)^3}{x^5} \bullet 1000$ es equivalente a

(1) $1000x$
(2) $1000 + x$
(3) 1000
(4) 0

19 Si $-2x + 3 = 7$ y $3x + 1 = 5 + y$, el valor de y es

(1) 1
(2) 0
(3) –10
(4) 10

20 ¿Cuál es lo converso de la afirmación "Si es domingo, entonces no voy a la escuela"?

(1) Si no voy a la escuela, entonces es domingo.
(2) Si no es domingo, entonces no voy a la escuela.
(3) Si voy a la escuela, entonces no es domingo.
(4) Si no es domingo, entonces voy a la escuela.

21 Si el punto (–1,0) está sobre la línea cuya ecuación es $y = 2x + b$, ¿cuál es el valor de b?

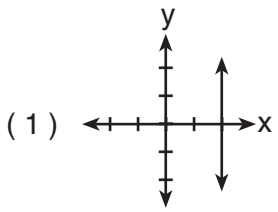
(1) 1
(2) 2
(3) 3
(4) 0

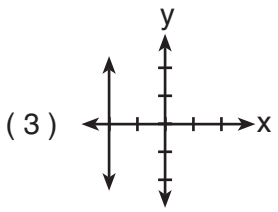
22 Si $r = 2$ y $s = -7$, ¿cuál es el valor de $|r| - |s|$?

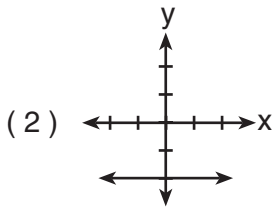
(1) 5
(2) –5
(3) 9
(4) –9

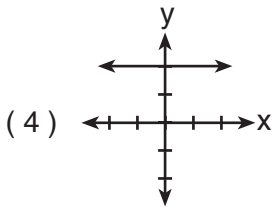
Use este espacio para sus cómputos.

23 ¿Cuál gráfico representa la ecuación $x = 2$?

(1)


(3)


(2)


(4)


24 En un dibujo a escala del nuevo patio de recreo de una escuela, un área triangular tiene lados cuyas longitudes son 8 centímetros, 15 centímetros y 17 centímetros. Si el área triangular situada en el patio de recreo tiene un perímetro de 120 metros, ¿cuál es la longitud de su lado más largo?

(1) 24 m
(2) 40 m
(3) 45 m
(4) 51 m

25 Si tanto a como b son números enteros impares ¿qué expresión será siempre igual a un número entero impar?

(1) $a + b$
(2) $a - b$
(3) $a \cdot b$
(4) $\frac{a}{b}$

26 ¿Qué cuadrilátero debe tener diagonales que sean congruentes y perpendiculares?

(1) rombo
(2) cuadrado
(3) trapezoide
(4) paralelogramo

Use este espacio para sus cómputos.

27 La longitud de un lado de la ventana cuadrada de la habitación de Jessica está representado por $2x - 1$. ¿Cuál expresión representa el área de la ventana?

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

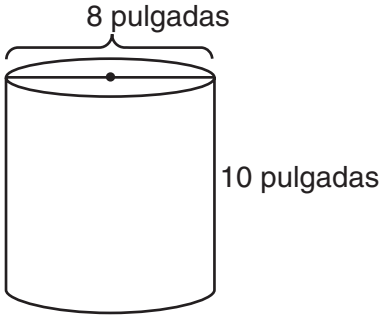
28 ¿Cuál ecuación representa una línea que está perpendicular a la línea cuya ecuación es $-2y = 3x + 7$?

(1) $y = x + 7$
(2) $2y = 3x - 3$
(3) $y = \frac{2}{3}x - 3$
(4) $y = \frac{3}{2}x - 3$

29 La probabilidad de que los Cubs ganen su primer partido es de $\frac{1}{3}$. La probabilidad de que los Cubs ganen su segundo partido es de $\frac{3}{7}$. ¿Cuál es la probabilidad de que los Cubs ganen ambos partidos?

(1) $\frac{16}{21}$
(2) $\frac{1}{7}$
(3) $\frac{6}{7}$
(4) $\frac{2}{5}$

30 En el siguiente diagrama se muestra un contenedor de almacenaje con la forma de un cilindro circular recto.



¿Cuál es el volumen de este contenedor *al centésima más cercana*?

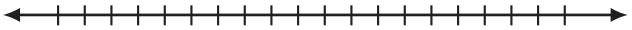
(1) 56.55 pulgadas^3
(2) 125.66 pulgadas^3
(3) 251.33 pulgadas^3
(4) 502.65 pulgadas^3

Parte II

Conteste todas las preguntas de esta parte. Cada respuesta correcta recibirá 2 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficas, tablas, etc. Para todas las preguntas de esta parte, una repuesta numérica correcta sin mostrar el proceso de cálculo sólo recibirá un punto. [10]

31 Una cinta de 56 centímetros de largo se corta en dos pedazos. Uno de los pedazos es tres veces más largo que el otro. Encuentre las longitudes, en centímetros, de *ambos* pedazos de cinta.

32 Los fabricantes del coche de Ron recomiendan que la presión de los neumáticos sea, como mínimo, de 26 libras por pulgada cuadrada y menos de 35 libras por pulgada cuadrada. En la siguiente línea numérica, grafique la desigualdad que representa la presión recomendada de los neumáticos.



33 En una encuesta a 400 adolescentes en un gran centro comercial, 240 dijeron que compraban en Abernathy's, 210 dijeron que compraban en Bongo Republic, y 90 dijeron que compraban en ambas tiendas. ¿Cuántos de los adolescentes encuestados no compraban en ninguna de las dos tiendas?

34 Una clase de álgebra de 21 estudiantes debe enviar a 5 estudiantes a reunirse con el director. ¿Cuántos grupos distintos de 5 estudiantes se podrían formar en esa clase?

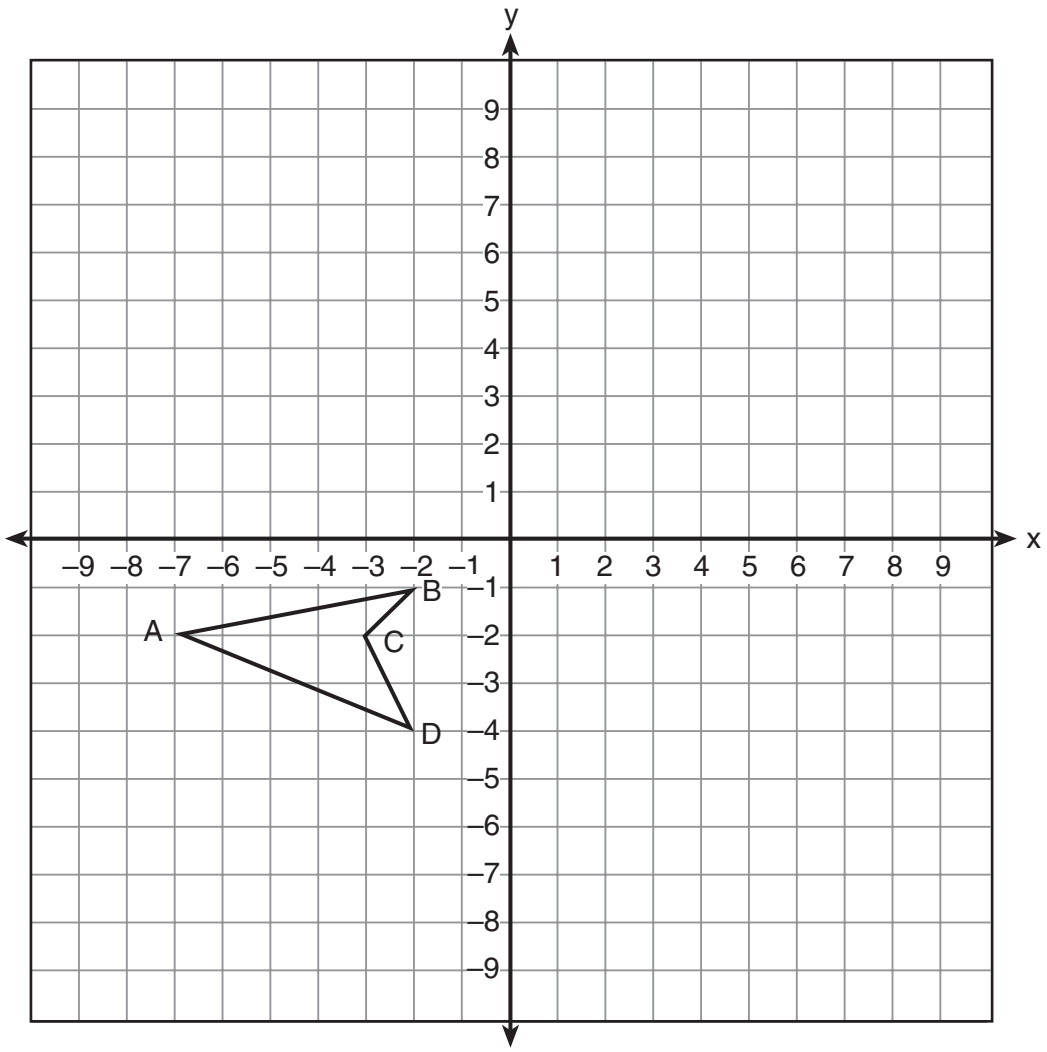
35 Factorar completamente: $3x^2 + 15x - 42$

Parte III

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

36 El Señor James quería sembrar un jardín que tuviera forma rectangular. Le dieron 80 pies de cercado para rodear su jardín. Él quiere que la longitud sea 10 pies más que el doble de la anchura. ¿Cuáles son las dimensiones, en pies, de un jardín rectangular que necesitará exactamente 80 pies de cercado?

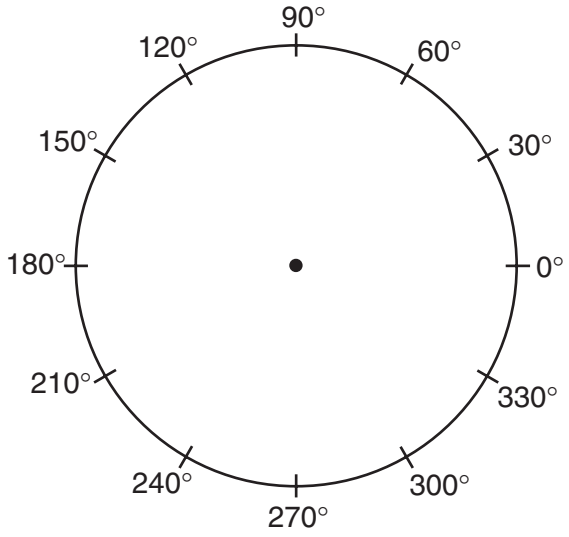
37 En el siguiente eje de coordenadas, dibuje la reflexión de *ABCD* en el eje-*y*. Marque y escriba las coordenadas de la figura reflejada.



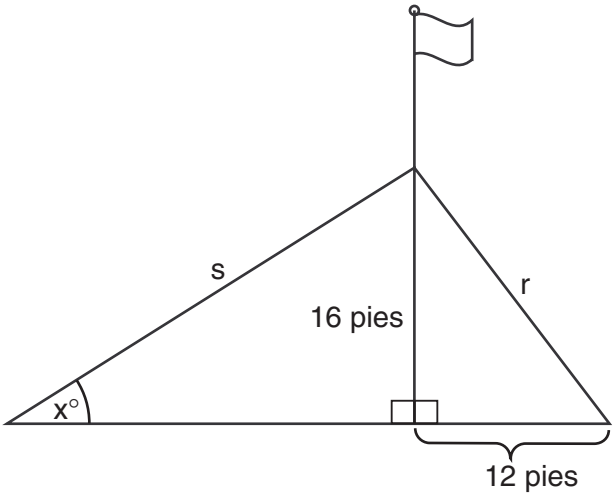
Parte IV

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

38 En una clase de 24 estudiantes, 10 tienen el pelo castaño, 8 tienen el pelo negro, 4 tienen el pelo rubio y 2 tienen el pelo rojo. Sobre el siguiente diagrama, haga un gráfico circular para mostrar el color de pelo de los estudiantes.



39 El siguiente diagrama muestra un asta de bandera que se levanta sobre un suelo plano. Dos cables, *r* y *s* están unidos al poste en un punto que se encuentra a 16 pies por encima del suelo. La longitud conjunta de los dos cables es de 50 pies. Si el cable *r* está unido al suelo a 12 pies de la base del poste, ¿cuál es la medida del ángulo *x*, *al grado más cercano*, que el cable *s* forma con el suelo?

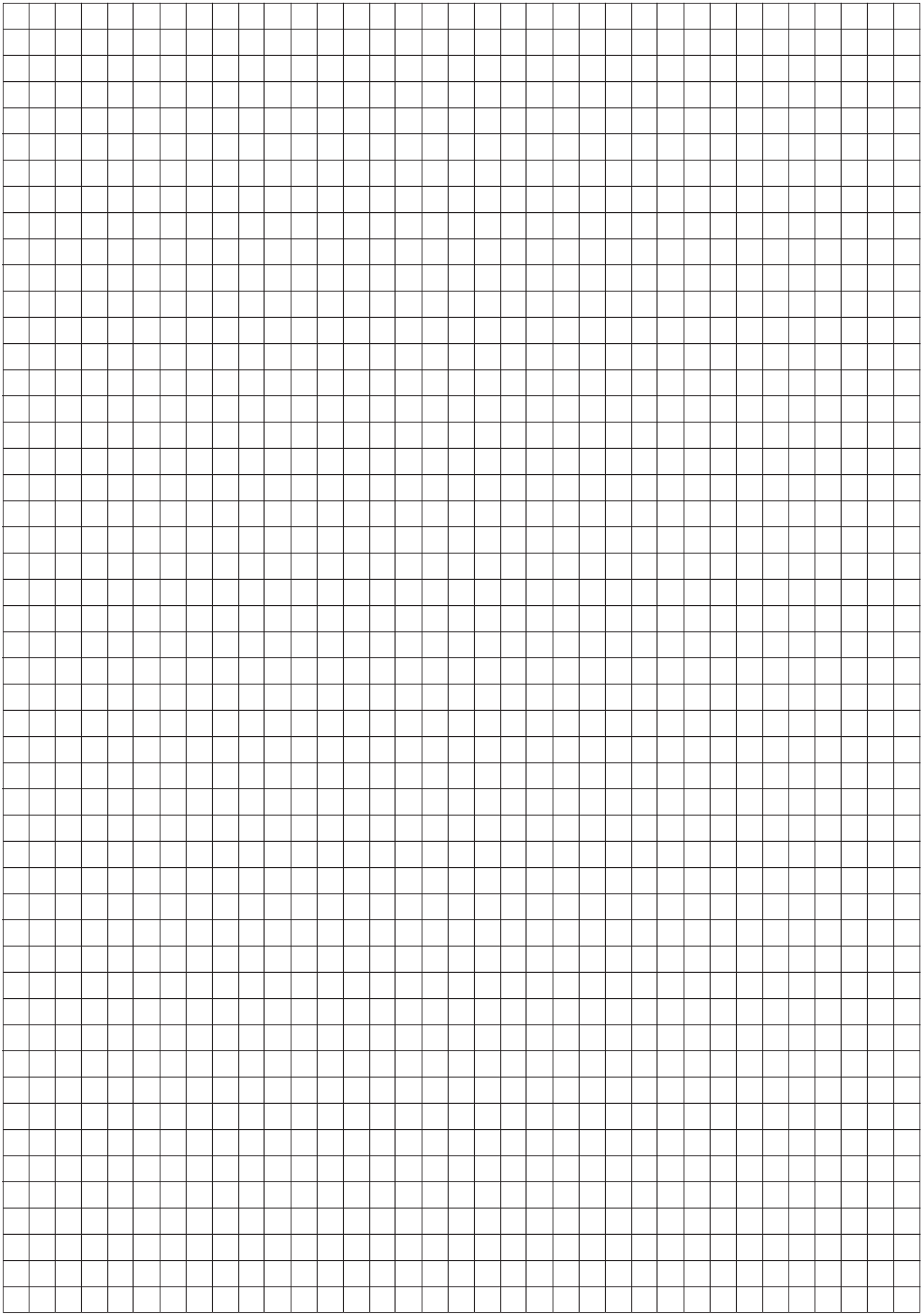


Papel Borrador Cuadriculado — Esta hoja no será calificada.

Desprender por la línea perforada

Desprender por la línea perforada

Papel Borrador 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, 16 de Junio, 2005 — 1:15 a 4:15 p.m., solamente

HOJADE RESPUESTAS

Estudiante . . . . . Sexo: ☐ Masculino ☐ Feminino Grado . . . . .

Maestro . . . . . Escuela . . . . .

Sus respuestas para la Parte I deben 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 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

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Thursday, June 16, 2005 — 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 Administering and 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 Thursday, June 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) 1	(6) 4	(11) 3	(16) 3	(21) 2	(26) 2
(2) 3	(7) 2	(12) 1	(17) 2	(22) 2	(27) 4
(3) 1	(8) 1	(13) 4	(18) 1	(23) 1	(28) 3
(4) 3	(9) 4	(14) 2	(19) 3	(24) 4	(29) 2
(5) 4	(10) 4	(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 Administering and Scoring 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]** 14 and 42, and appropriate work is shown, such as $x + 3x = 56$, a table, 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 only one of the two lengths is found.

or

[1] A correct equation is written and solved, but the lengths are not stated.

or

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

or

[1] 14 and 42, 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.

(32) **[2]** A correct graph is drawn on the number line, with a closed circle at the left end and an open circle at the right end.

[1] Appropriate work is shown, but one graphing error is made, such as writing an incorrect scale on the number line.

or

[1] Appropriate work is shown, but one conceptual error is made, such as using a closed circle instead of an open circle.

or

[1] A correct inequality is written, but the graph is not drawn.

[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]** 40, and appropriate work is shown, such as a Venn diagram or $(240 + 210) - 90 = 360$ and $400 - 360 = 40$.

[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] 40, 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]** 20,349, and appropriate work is shown, such as ${}_{21}C_5 = 20{,}349$.

[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 determining the value of ${}_{21}P_5$.

or

[1] 20,349, 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]** $3(x + 7)(x - 2)$, and appropriate work is shown.

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

or

[1] A conceptual error is made, such as incomplete factoring.

or

[1] $3(x + 7)(x - 2)$, 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]** 10 and 30, and appropriate work is shown, such as $2x + 2(2x + 10) = 80$ or trial and error with at least three trials and appropriate checks.

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

or

[2] Appropriate work is shown, but only one of the dimensions is found.

or

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

[1] Appropriate work is shown, but two or more computational errors are 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] An incorrect equation of equal difficulty is solved appropriately.

or

[1] Appropriate solutions are found based on the incorrect use of the perimeter formula, such as $3x + 10 = 80$.

or

[1] 10 and 30, but no work or only one trial with an appropriate check is shown.

[0] 10 *or* 30, 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.

(37) **[3]** The figure is drawn accurately and the new coordinates are labeled and stated as $A'(7,-2)$, $B'(2,-1)$, $C'(3,-2)$, and $D'(2,-4)$.

[2] One error is made in drawing the figure, such as misplotting one point, but the new coordinates are labeled and stated appropriately, based on that figure.

or

[2] The figure is drawn and labeled accurately, but the new coordinates are not stated or are stated incorrectly.

or

[2] The new coordinates are labeled and stated correctly, but the figure is not drawn.

[1] Two errors are made in drawing the reflected figure, but the new coordinates are labeled and stated appropriately, based on that figure.

or

[1] Appropriate work is shown, but one conceptual error is made, such as reflecting the figure in the x-axis or the origin.

or

[1] Correct points are plotted and labeled, but the figure is not drawn, and the coordinates are not stated.

or

[1] The figure is drawn correctly, but the new coordinates are not labeled or stated.

[0] An appropriate reflection in the x-axis is drawn, and the coordinates are not labeled or stated.

or

[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]** A correct circle graph is drawn and labeled, and appropriate work is shown, such as using proportions. [A correct graph will show 150° for brown, 120° for black, 60° for blond, and 30° for red.]

[3] Appropriate work is shown, but one computational error is made, but an appropriate graph is drawn.

or

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

or

[3] Appropriate work is shown and a correct graph is drawn, but the sectors are not labeled or are labeled incorrectly.

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

or

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

or

[2] Correct numbers of degrees or correct proportional values are found, but two or more graphing errors are made.

or

[2] Correct numbers of degrees or correct proportional values are found, but no graph is drawn.

or

[2] A correct circle graph is drawn and labeled, but no work is shown.

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

or

[1] At least two numbers of degrees or proportional values are found correctly, but no graph or an incorrect 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.

(39) **[4]** 32, and appropriate work is shown, such as $12^2 + 16^2 = r^2$, $50 - r = s$, and $\sin x = \frac{16}{30}$.

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

or

[3] Appropriate work is shown to find $r = 20$ and $s = 30$ and the trigonometric equation $\sin x = \frac{16}{30}$ is written, but it is not solved or is solved 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, such as using an incorrect trigonometric function to find the angle.

or

[2] The lengths of r and s are found correctly, but no further correct work is shown.

or

[2] Incorrect lengths are found for r and s, but the sine function is used correctly to find an appropriate angle.

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

or

[1] The length of r is found correctly, but no further correct work is shown.

or

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

Regents Examination in Mathematics A

June 2005

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

The *Chart for Determining the Final Examination Score for the June 2005 Regents Examination in Mathematics A*, normally located on this page, will be posted on the Department's web site http://www.emsc.nysed.gov/osa/ on Thursday, June 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.