SPANISH EDITION
INTEGRATED ALGEBRA
THURSDAY, AUGUST 14, 2014
8:30 to 11:30 A.M., ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

ÁLGEBRA INTEGRADA

Jueves, 14 de agosto de 2014 — 8:30 a 11:30 a.m., solamente

Nombre del estudiante: _____

Nombre de la escuela: _____

La posesión o el uso de cualquier aparato destinado a la comunicación están estrictamente prohibidos mientras esté realizando el examen. Si usted tiene o utiliza cualquier aparato destinado a la comunicación, aunque sea brevemente, su examen será invalidado y no se calculará su calificación.

Escriba en letra de molde su nombre y el nombre de su escuela en las líneas de arriba.

Se le ha proporcionado una hoja de respuestas separada para la Parte I. Siga las instrucciones del supervisor para completar la información del estudiante en su hoja de respuestas.

Este examen tiene cuatro partes, con un total de 39 preguntas. Usted debe responder todas las preguntas de este examen. Escriba sus respuestas a las preguntas de selección múltiple de la Parte I en la hoja de respuestas separada. Escriba sus respuestas a las preguntas de las Partes II, III y IV directamente en este folleto. Todo el trabajo debe ser realizado con bolígrafo de tinta permanente, con excepción de los gráficos y los dibujos, que deben hacerse con lápiz grafito. Indique claramente los pasos necesarios, incluyendo apropiadamente las sustituciones de fórmulas, diagramas, gráficos, tablas, etc. Las fórmulas que podría necesitar para responder a ciertas preguntas se encuentran al final de este examen. Esta hoja está perforada para que pueda desprenderla de este folleto.

No se permite el uso de papel de borrador para ninguna parte de este examen, pero puede usar los espacios en blanco en este folleto como papel de borrador. Una hoja perforada de papel cuadriculado de borrador está provista al final de este folleto para cualquier pregunta para la cual sea útil un gráfico, aunque no se requiere. Puede desprender esta hoja del folleto. Todo trabajo realizado en esta hoja de papel cuadriculado de borrador *no* será calificado.

Cuando haya terminado el examen, deberá firmar la declaración impresa al final de la hoja de respuestas, indicando que no tenía conocimiento ilegal previo de las preguntas o respuestas del examen y que no ha dado ni recibido asistencia alguna para responder a las preguntas durante el examen. Su hoja de respuestas no será aceptada si no firma dicha declaración.

Aviso...

Se le debe proporcionar una calculadora para hacer gráficos y una regla para que utilice mientras realiza el examen.

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

Parte I

Responda las 30 preguntas de esta parte. Cada respuesta correcta recibirá 2 créditos. No se dará ningún crédito parcial. Para cada pregunta, escriba en la hoja de respuestas separada el número que precede a la palabra o expresión que mejor complete el enunciado o que mejor responda a la pregunta. [60]

Utilice este espacio para sus cálculos.

1 ¿Cuál es el producto de $3a^2b$ y $-2ab^3$?

(1) a^2b^3

(2) a^3b^4

(3) $-6a^2b^3$

(4) $-6a^3b^4$

2 El valor de la expresión $|-20| - |6|$ es

(1) 26

(2) 14

(3) -14

(4) -26

3 Cuando $9x^2 - 100$ se factoriza, es equivalente a $(3x - b)(3x + b)$. ¿Cuál es un valor para b?

(1) 50

(2) 10

(3) 3

(4) 100

4 ¿Qué ecuación representa la línea que pasa a través de los puntos (1,1) y (−2,7)?

(1) $y = -2x + 9$

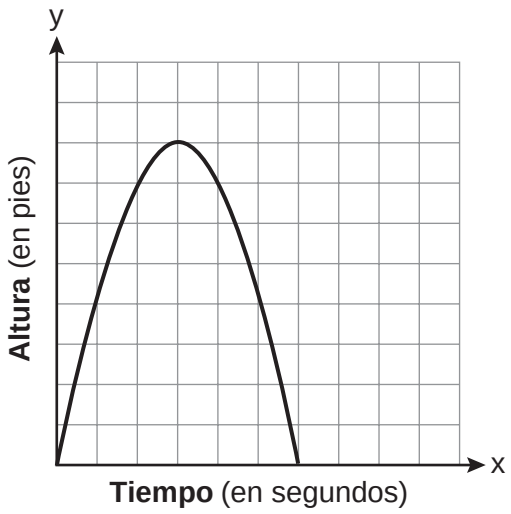
(2) $y = -2x + 3$

(3) $y = -\frac{1}{2}x + 8$

(4) $y = -\frac{1}{2}x + 6$

Utilice este espacio para sus cálculos.

5 El siguiente gráfico representa la trayectoria parabólica de una pelota que pateó un niño pequeño. ¿Cuáles son el vértice y el eje de simetría de la parábola?



(1) vértice: (3,8); eje de simetría: $x = 3$

(2) vértice: (3,8); eje de simetría: $y = 3$

(3) vértice: (8,3); eje de simetría: $x = 3$

(4) vértice: (8,3); eje de simetría: $y = 3$

6 ¿Qué relación puede describirse mejor como causal?

(1) Suena la alarma y sale el sol.

(2) El automóvil se desplaza lentamente y el conductor canta.

(3) La nieve cae y a las tiendas se les acaban las palas para nieve.

(4) Los pájaros cantan y cae la lluvia.

7 En una clase, ¿qué datos pueden clasificarse como cualitativos?

(1) la edad de los estudiantes

(2) el peso de los estudiantes

(3) la talla de calzado de los estudiantes

(4) el color de cabello de los estudiantes

Utilice este espacio para sus cálculos.

8 Dado lo siguiente:

A = {Charles, Kyle, Nakim, Jade}
B = {Charles, Jade, Alicia, Kyle}
C = {Kyle, Nakim, Jade, Dylan}

¿Cuál es la intersección de los conjuntos A, B y C?

(1) {Kyle, Nakim}
(2) {Charles, Kyle}
(3) {Jade, Nakim}
(4) {Jade, Kyle}

9 La suma de $\frac{3x-4}{x+3}$ y $\frac{2x-5}{x+3}$ es

(1) $\frac{5x-9}{x+3}$
(2) $\frac{5x+1}{2x+6}$
(3) $\frac{5x-9}{x+6}$
(4) $\frac{5x+1}{x+3}$

10 Si la edad de Rosa está representada por R, ¿qué desigualdad representa el enunciado "Rosa tiene como máximo 29 años de edad"?

(1) $R < 29$
(2) $R > 29$
(3) $R \leq 29$
(4) $R \geq 29$

11 ¿Cuál es la pendiente de una línea que pasa a través de los puntos $(-7,5)$ y $(5,-3)$?

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

12 Una correlación positiva existe siempre en un diagrama de dispersión cuando

(1) y permanece sin cambios a medida que x aumenta
(2) y cambia al azar a medida que x aumenta
(3) y disminuye a medida que x aumenta
(4) y aumenta a media que x aumenta

Utilice este espacio para sus cálculos.

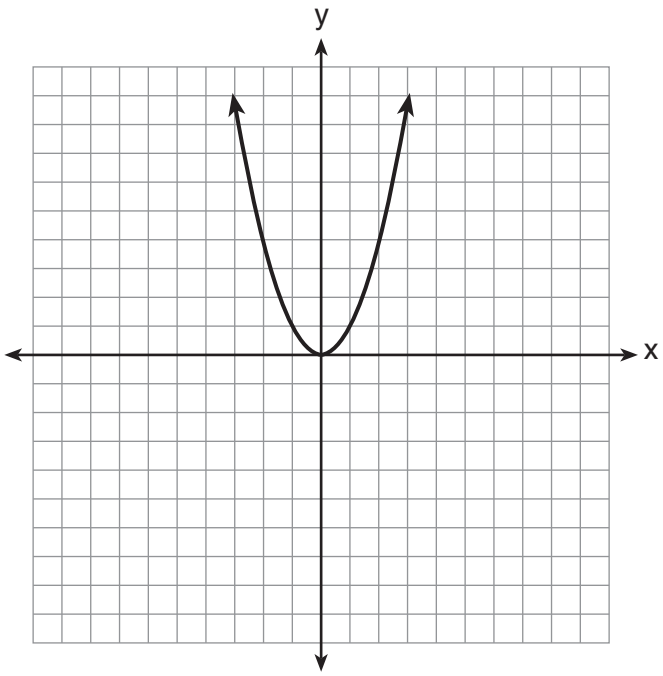
13 Un sándwich está compuesto por un tipo de carne, un tipo de aderezo y un tipo de queso. Las opciones posibles se muestran a continuación:

Carne: res, pollo, pavo
Aderezo: ketchup, mostaza, mayonesa
Queso: americano, cheddar, provolone, mozzarella

En el espacio muestral de todos los sándwiches diferentes posibles compuestos por un tipo de carne, un tipo de aderezo y un tipo de queso, ¿cuántos sándwiches *no* incluyen el queso provolone?

(1) 27
(2) 9
(3) 3
(4) 36

14 A continuación se muestra el gráfico de la ecuación $y = x^2$.



¿Qué enunciado describe mejor el cambio en este gráfico cuando se multiplica por 4 el coeficiente de x^2?

(1) La parábola se vuelve más ancha.
(2) La parábola se vuelve más angosta.
(3) La parábola cambiará cuatro unidades hacia arriba.
(4) La parábola cambiará cuatro unidades hacia la derecha.

Utilice este espacio para sus cálculos.

15 Un estacionamiento tiene 100 yardas de largo. ¿Cuál es la longitud de $\frac{3}{4}$ del estacionamiento, en pies?

1 yarda = 3 pies

(1) 300
(3) 75
(2) 225
(4) 25

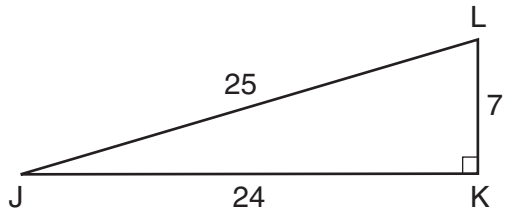
16 ¿Cuál es la solución de la ecuación $\frac{12}{7x} + \frac{3}{2x} = \frac{15}{14}$?

(1) 1
(3) 3
(2) 5
(4) 14

17 La expresión $\frac{2x^2 + 10x - 28}{4x + 28}$ es indefinida cuando x es

(1) 7, solamente
(3) 7 o -2
(2) -7, solamente
(4) -7 o 2

18 En el triángulo rectángulo JKL que aparece en el siguiente diagrama, $KL = 7$, $JK = 24$, $JL = 25$ y $\angle K = 90°$.



¿Qué enunciado *no* es verdadero?

(1) $\tan L = \frac{24}{7}$
(3) $\tan J = \frac{7}{24}$
(2) $\cos L = \frac{24}{25}$
(4) $\operatorname{sen} J = \frac{7}{25}$

Utilice este espacio para sus cálculos.

19 Un maestro le pidió a la clase que resolviera la ecuación $3(x + 2) = 21$. Robert escribió $3x + 6 = 21$ como su primer paso. ¿Qué propiedad usó Robert?

(1) propiedad asociativa
(2) propiedad conmutativa
(3) propiedad distributiva
(4) propiedad aditiva del cero

20 Si las raíces de una ecuación cuadrática son -4 y 2, la ecuación es equivalente a

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

21 Kelsey obtuvo los siguientes puntos en sus primeros seis juegos de baloncesto: 22, 14, 19, 22, 8 y 17. ¿Cuál es la relación entre las medidas de tendencia central de estos datos?

(1) modo > mediana > media
(2) mediana > modo > media
(3) media > mediana > modo
(4) modo > media > mediana

22 Sheba abrió una cuenta de jubilación con $36,500. Su cuenta creció a una tasa del 7% compuesto anual por año. No realizó depósitos ni retiros de la cuenta. Después de 20 años, ¿cuánto valía su cuenta, al *dólar más cercano*?

(1) $87,600
(2) $130,786
(3) $141,243
(4) $1,483,444,463

23 ¿Qué ecuación representa una línea vertical?

(1) $y = -x$
(2) $y = 12$
(3) $x = y$
(4) $x = 12$

Utilice este espacio para sus cálculos.

24 Byron tiene 72 monedas en su alcancía. La alcancía tiene solo monedas de 10 centavos y 25 centavos. Si tiene \$14.70 en su alcancía, ¿qué ecuación puede usarse para determinar q, la cantidad de monedas de 25 centavos que tiene?

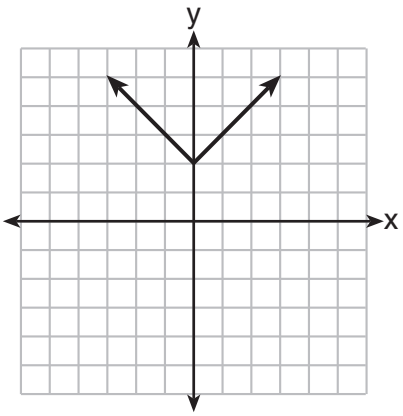
(1) $14.70 + 0.25q = 72$

(2) $0.10(q - 72) + 0.25q = 14.70$

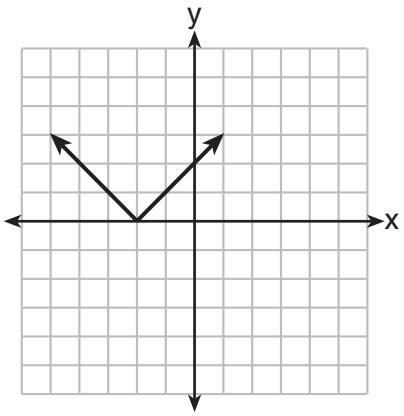
(3) $0.10(72 - q) + 0.25q = 14.70$

(4) $0.10q + 0.25(72 - q) = 14.70$

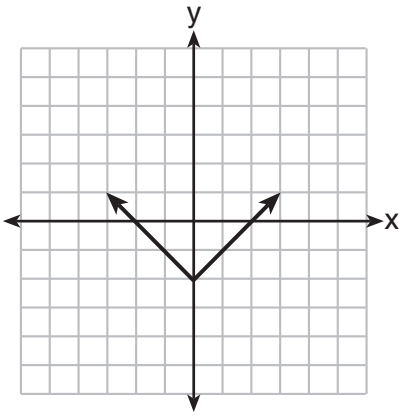
25 ¿Qué gráfico representa la ecuación $y = |x - 2|$?



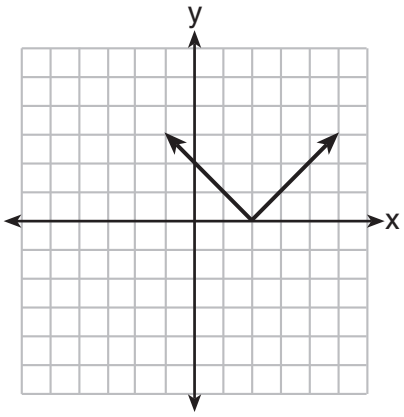
(1)



(3)



(2)



(4)

Utilice este espacio para sus cálculos.

26 Si $ax + 3 = 7 - bx$, ¿qué es x expresada en términos de a y b?

(1) $\frac{4}{ab}$

(2) $-\frac{4}{ab}$

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

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

27 ¿Qué ecuación representa una línea que es paralela a la línea cuya ecuación es $y = -3x$?

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

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

(3) $6x + 2y = 4$

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

28 ¿Cuál es el resultado cuando $6x^2 - 13x + 12$ se le resta a $-3x^2 + 6x + 7$?

(1) $3x^2 - 7x + 19$

(2) $9x^2 - 19x + 5$

(3) $9x^2 - 7x + 19$

(4) $-9x^2 + 19x - 5$

29 ¿Cuál es el conjunto de soluciones de la ecuación $\frac{x}{3} = \frac{8}{x+2}$?

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

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

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

(4) $\{6,4\}$

30 ¿Qué conjunto de números enteros está incluido en $(-1,3]$?

(1) $\{0,1,2,3\}$

(2) $\{-1,0,1,2\}$

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

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

Parte II

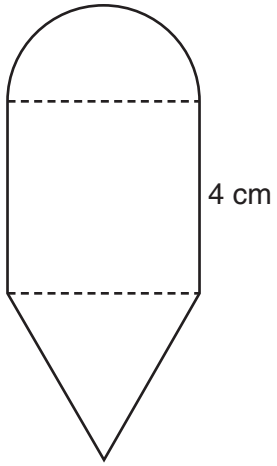
Responda las 3 preguntas de esta parte. Cada respuesta correcta recibirá 2 créditos. Indique claramente los pasos necesarios, incluyendo apropiadamente las sustituciones de fórmulas, diagramas, gráficos, tablas, etc. Para todas las preguntas en esta parte, una respuesta numérica correcta sin demostrar el trabajo recibirá solamente 1 crédito. Todas las respuestas deben escribirse con bolígrafo de tinta permanente, con excepción de los gráficos y los dibujos, que deben hacerse con lápiz grafito. [6]

31 Usando estos datos sobre la población anual de ciervos de un bosque, Noj descubrió la siguiente información:

Percentil 25: 12
Percentil 50: 15
Percentil 75: 22
Población mínima: 8
Población máxima: 27

Usando la siguiente recta numérica, construya un diagrama de caja y bigotes que muestre estos datos.

32 El siguiente diagrama está compuesto por un cuadrado con un lado de 4 cm, un semicírculo en la parte superior y un triángulo equilátero en la parte inferior. Encuentre el perímetro de la figura a la *décima de un centímetro más cercana*.

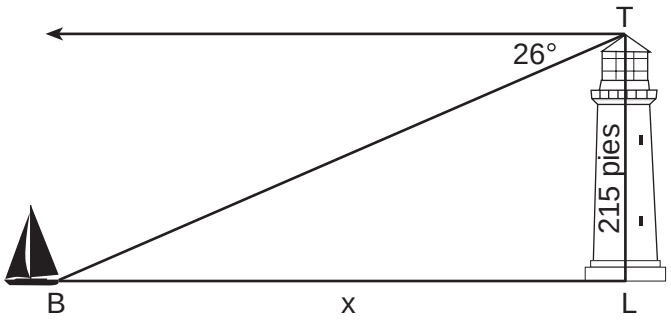


33 Un termo de forma cilíndrica se llena con café hasta llegar a 1 pulgada antes del borde. La altura del cilindro es de 12 pulgadas y el radio es de 2.5 pulgadas. Enuncie, a la *centésima de una pulgada cúbica más cercana*, el volumen de café que tiene el termo.

Parte III

Responda las 3 preguntas de esta parte. Cada respuesta correcta recibirá 3 créditos. Indique claramente los pasos necesarios, incluyendo apropiadamente las sustituciones de fórmulas, diagramas, gráficos, tablas, etc. Para todas las preguntas en esta parte, una respuesta numérica correcta sin demostrar el trabajo recibirá solamente 1 crédito. Todas las respuestas deben escribirse con bolígrafo de tinta permanente, con excepción de los gráficos y los dibujos, que deben hacerse con lápiz grafito. [9]

34 La parte superior de un faro, *T*, está a 215 pies sobre el nivel del mar, *L*, como se muestra en el siguiente diagrama. El ángulo de depresión desde la parte superior del faro hasta un barco, *B*, en el mar es de 26º. Determine, al *pie más cercano*, la distancia horizontal, *x*, desde el barco hasta la base del faro.



35 Hay seis manzanas, cinco naranjas y una pera en la canasta de John. Su amigo toma tres frutas al azar, sin reemplazarlas. Determine la probabilidad de que las tres frutas que tomó sean manzanas.

36 Exprese $y\sqrt{3} - \left(\sqrt{32} + y\sqrt{27}\right)$ en la forma radical más simple.

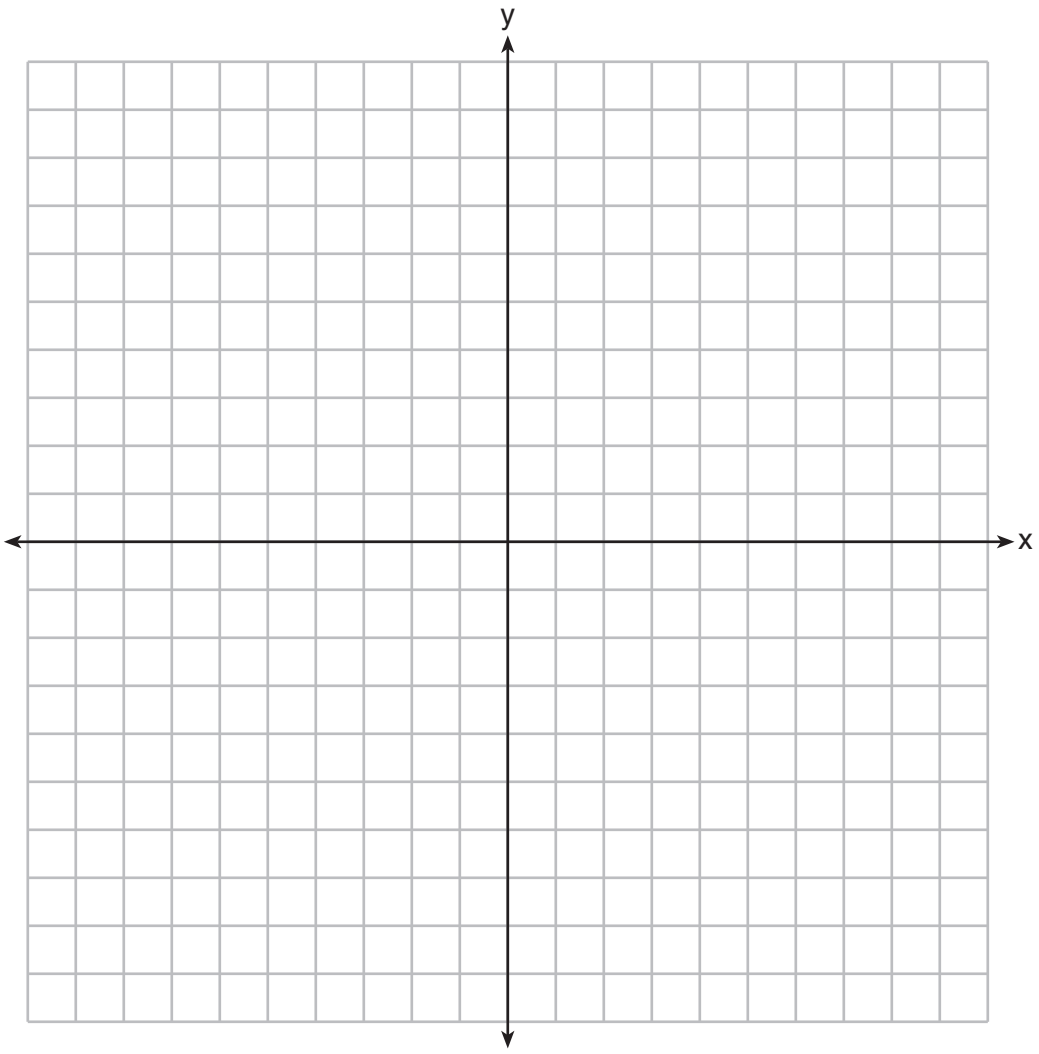
Parte IV

Responda las 3 preguntas de esta parte. Cada respuesta correcta recibirá 4 créditos. Indique claramente los pasos necesarios, incluyendo apropiadamente las sustituciones de fórmulas, diagramas, gráficos, tablas, etc. Para todas las preguntas en esta parte, una respuesta numérica correcta sin demostrar el trabajo recibirá solamente 1 crédito. Todas las respuestas deben escribirse con bolígrafo de tinta permanente, con excepción de los gráficos y los dibujos, que deben hacerse con lápiz grafito. [12]

37 En el conjunto de ejes a continuación, resuelva gráficamente el siguiente sistema de desigualdades.

$$y + 3 < 2x$$
$$-2y \leq 6x - 10$$

Enuncie las coordenadas de un punto en el conjunto de soluciones.



38 El lado real de una baldosa cuadrada es de 4 pulgadas. Los fabricantes permiten un error relativo de 0.025 en el área de una baldosa. Se usan dos máquinas para cortar las baldosas. La máquina *A* produce una baldosa cuadrada con una longitud de 3.97 pulgadas. La máquina *B* produce una baldosa cuadrada con una longitud de 4.12 pulgadas. Determine cuál máquina produce una baldosa cuya área esté dentro del error relativo permitido.

39 Resuelva algebraicamente el siguiente sistema de ecuaciones:

$$y = x^2 - 6x + 9$$
$$y = -9x + 19$$

Desprender por la línea perforada

Desprender por la línea perforada

Papel cuadriculado de borrador — Esta hoja *no* será calificada.

Papel cuadriculado de borrador — Esta hoja *no* será calificada.

Desprender por la línea perforada

Desprender por la línea perforada

Desprender por la línea perforada

Hoja de referencia

Razones trigonométricas		$\text{sen A} = \frac{opuesto}{hipotenusa}$
		$\cos A = \frac{adyacente}{hipotenusa}$
		$\tan A = \frac{opuesto}{adyacente}$

Área	trapecio	$A = \frac{1}{2}h(b_1 + b_2)$

Volumen	cilindro	$V = \pi r^2 h$

Área de superficie	prisma rectangular	$SA = 2lw + 2hw + 2lh$
	cilindro	$SA = 2\pi r^2 + 2\pi rh$

Geometría analítica	$m = \frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$

Desprender por la línea perforada

INTEGRATED ALGEBRA SPANISH EDITION

Desprender por la línea perforada

Desprender por la línea perforada

Impreso en papel reciclado

INTEGRATED ALGEBRA SPANISH EDITION

FOR TEACHERS ONLY

The University of the State of New York
REGENTS HIGH SCHOOL EXAMINATION

INTEGRATED ALGEBRA

Thursday, August 14, 2014 — 8:30 to 11:30 a.m., only

SCORING KEY AND RATING GUIDE

Mechanics of Rating

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

Do *not* attempt to correct the student's work by making insertions or changes of any kind. In scoring the open-ended questions, 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. No one teacher is to score more than approximately one-third of the open-ended questions on a student's paper. Teachers may not score their own students' answer papers. On the student's separate answer sheet, for each question, record the number of credits earned and the teacher's assigned rater/scorer letter.

Schools are not permitted to rescore any of the open-ended questions on this exam after each question has been rated once, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately.

Raters should record the student's scores for all questions and the total raw score on the student's separate answer sheet. Then the student's total raw score should be converted to a scale score by using the conversion chart that will be posted on the Department's web site at: http://www.p12.nysed.gov/assessment/ on Thursday, August 14, 2014. Because scale scores corresponding to raw scores in the conversion chart may change from one administration 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 student's scale score should be entered in the box provided on the student's separate answer sheet. The scale score is the student's final examination score.

If the student's responses for the multiple-choice questions are being hand scored prior to being scanned, the scorer must be careful not to make any marks on the answer sheet except to record the scores in the designated score boxes. Marks elsewhere on the answer sheet will interfere with the accuracy of the scanning.

Part I

Allow a total of 60 credits, 2 credits for each of the following.

(1) 4	(11) 2	(21) . . . . . 1 . . . . .
(2) 2	(12) 4	(22) . . . . . 3 . . . . .
(3) 2	(13) 1	(23) . . . . . 4 . . . . .
(4) 2	(14) 2	(24) . . . . . 3 . . . . .
(5) 1	(15) 2	(25) . . . . . 4 . . . . .
(6) 3	(16) 3	(26) . . . . . 3 . . . . .
(7) 4	(17) 2	(27) . . . . . 3 . . . . .
(8) 4	(18) 2	(28) . . . . . 4 . . . . .
(9) 1	(19) 3	(29) . . . . . 2 . . . . .
(10) 3	(20) 1	(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 at: http://www.p12.nysed.gov/assessment/ and select the link "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 Examination in Integrated Algebra 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*, use their own professional judgment, confer with other mathematics teachers, and/or contact 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, graphs, 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 2 credits. Unless other wise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(31) **[2]** A correct box-and-whisker plot with a correct scale is drawn and labeled.

[1] A box-and-whisker plot is drawn, but one graphing or labeling error is made.

or

[1] One conceptual error is made, but an appropriate box-and-whisker plot with an appropriate scale 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.

(32) **[2]** 22.3, and correct work is shown.

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

or

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

or

[1] 22.3, 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]** 215.98, and correct work is shown.

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

or

[1] Appropriate work is shown, but one conceptual error is made, such as finding the volume of the entire thermos. An appropriate volume is given.

or

[1] 215.98, 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 3 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(34) **[3]** 441, and correct work is shown.

[2] Appropriate work is shown, but one computational or rounding error is made. An appropriate distance is found.

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

or

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

or

[1] $\tan 64 = \frac{x}{215}$ or $\tan 26 = \frac{215}{x}$ is written, but no further correct work is shown.

or

[1] 441, 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) **[3]** $\frac{120}{1320}$ or an equivalent answer, and correct work is shown.

[2] Only $\frac{6}{12} \bullet \frac{5}{11} \bullet \frac{4}{10}$ or $\frac{{}_6P_3}{{}_{12}P_3}$ is written, but no further correct work is shown.

or

[2] Appropriate work is shown, but one computational error is made. An appropriate probability is found.

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

or

[1] Appropriate work is shown, but one conceptual error is made, such as adding the probabilities. An appropriate probability is found.

or

[1] $\frac{6}{12}$, $\frac{5}{11}$ and $\frac{4}{10}$ or ${}_6P_3$ and ${}_{12}P_3$ are written.

or

[1] $\frac{120}{1320}$, 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.

(36) **[3]** $-2y\sqrt{3} - 4\sqrt{2}$, and correct work is shown.

[2] Appropriate work is shown, but one computational or simplification error is made. An appropriate answer in simplest radical form is written.

[1] Appropriate work is shown, but two or more computational or simplification errors are made. An appropriate answer in simplest radical form is written.

or

[1] Appropriate work is shown, but one conceptual error is made. An appropriate answer in simplest form is written.

or

[1] $y\sqrt{3} - \left(4\sqrt{2} + 3y\sqrt{3}\right)$ is written, but no further correct work is shown.

or

[1] $-2y\sqrt{3} - 4\sqrt{2}$ but no work is shown.

[0] The answer is expressed as a decimal and 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.

Part IV

For each question, use the specific criteria to award a maximum of 4 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(37) **[4]** Both inequalities are graphed and shaded correctly, at least one is labeled, and coordinates of a point in the solution set are stated.

[3] Appropriate work is shown, but one graphing error is made, such as drawing a dashed line instead of a solid line or shading incorrectly. Appropriate coordinates are stated.

or

[3] Both inequalities are graphed and shaded correctly, but the graphs are not labeled or are labeled incorrectly. Appropriate coordinates are stated.

or

[3] Both inequalities are graphed and shaded correctly, and at least one is labeled, but coordinates are not stated or are stated incorrectly.

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

or

[2] Appropriate work is shown, but one conceptual error is made, such as graphing the lines $y = 2x - 3$ and $y = -3x + 5$ and stating (1.6,0.2), the point of intersection.

or

[2] Both inequalities are graphed and shaded correctly, but the graphs are not labeled or are labeled incorrectly, and coordinates are not stated or are stated incorrectly.

or

[2] One inequality is graphed, labeled, and shaded correctly, but no further correct work is shown.

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

or

[1] Appropriate work is shown to graph lines $y = 2x - 3$ and $y = -3x + 5$, but no further correct work is shown.

or

[1] A point in the solution set is stated, 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.

(38) **[4]** Machine *A* and correct work is shown.

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

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

or

[2] Appropriate work is shown, but one conceptual error is made. An appropriate machine is stated.

or

[2] Appropriate work is shown to correctly find the relative error of both machine *A* and machine *B*, but no further correct work is stated.

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

or

[1] Appropriate work is shown to correctly find the relative error of either machine *A* or machine *B*, but no further correct work is shown.

[0] Machine *A*, 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]** $(-5,64)$ and $(2,1)$ or equivalent, and correct algebraic work is shown.

[3] Appropriate work is shown, but one computational error is made. Appropriate values for x and y are stated.

or

[3] $x = -5$ and $x = 2$ and appropriate work is shown, but no further correct work is shown.

[2] Appropriate work is shown, but two or more computational errors are made. Appropriate values for x and y are stated.

or

[2] Appropriate work is shown, but one conceptual error is made. Appropriate values for x and y are stated.

or

[2] $(-5,64)$ and $(2,1)$ are stated, but a method other than algebraic is used.

or

[2] $x^2 + 3x - 10 = 0$ is written, but the equation is not solved or is solved incorrectly.

[1] Appropriate work is shown, but one conceptual error and one computational error are made. Appropriate values for x and y are stated.

or

[1] The equation $x^2 - 6x + 9 = -9x + 19$ is set up correctly, but no further correct work is shown.

or

[1] $(-5,64)$ and $(2,1)$, but no work is shown.

[0] $(-5,64)$ or $(2,1)$, 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 Core Curriculum

Content Strands	Item Numbers
Number Sense and Operations	2, 19, 36
Algebra	1, 3, 4, 8, 9, 10, 11, 16, 17, 18, 20, 22, 23, 24, 26, 27, 28, 29, 30, 34, 35, 39
Geometry	5, 14, 25, 32, 33, 37
Measurement	15, 38
Statistics and Probability	6, 7, 12, 13, 21, 31

Regents Examination in Integrated Algebra
August 2014
Chart for Converting Total Test Raw Scores to Final Examination Scores (Scale Scores)

The *Chart for Determining the Final Examination Score for the August 2014 Regents Examination in Integrated Algebra* will be posted on the Department's web site at: http://www.p12.nysed.gov/assessment/ on Thursday, August 14, 2014. Conversion charts provided for previous administrations of the Regents Examination in Integrated Algebra must NOT be used to determine students' final scores for this administration.

Online Submission of Teacher Evaluations of the Test to the Department

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

1. Go to http://www.forms2.nysed.gov/emsc/osa/exameval/reexameval.cfm.

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.

Regents Examination in Integrated Algebra – August 2014

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

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.

Schools are not permitted to rescore any of the open-ended questions on this exam after each question has been rated once, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately.

Because scale scores corresponding to raw scores in the conversion chart change from one administration 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 Integrated Algebra.