MATHEMATICS A

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATEMÁTICAS A

Martes, 25 de Enero, 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.

NO ABRA ESTE FOLLETO DE EXAMINACIÓN HASTA QUE SE LE DA LA SEÑAL.

Parte I

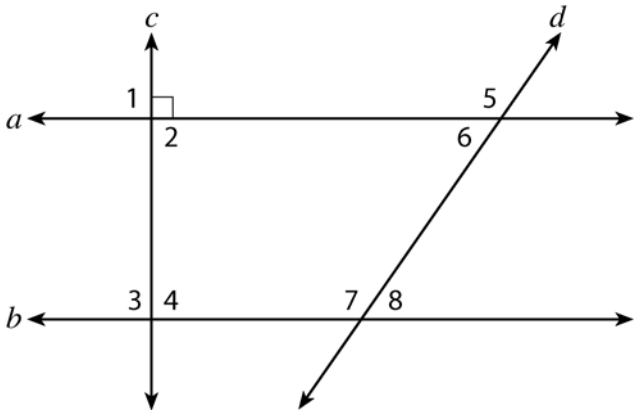
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. No se dará crédito parcial. Para cada pregunta, escriba en la hoja de respuestas separada, el número que precede la palabra o expresión que completa mejor la afirmación ó que contesta mejor la pregunta. [60]

Use este espacio para sus cómputos.

1 Stan estaba tratando de adivinar la edad de Melanie. Ella le dijo a él que su edad era un número par y multiplo de tres. ¿Cuál podriá ser la edad de Melanie?

(1) 10
(2) 12
(3) 15
(4) 16

2 En el siguiente diagrama, las líneas *a* y *b* son paralelas, y las líneas *c* y *d* son transversales.



¿Cuál ángulo es congruente con el ángulo 8?

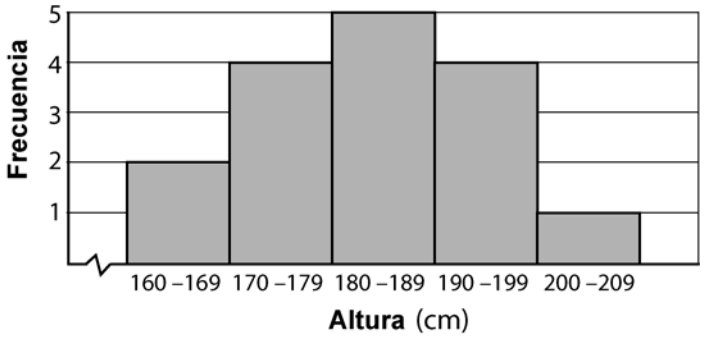
(1) 6
(2) 5
(3) 3
(4) 4

3 Un restaurán tiene cinco tipos de carne, dos tipos de queso, y tres tipos de pan. ¿Cuántos diferentes emparedados, que contengan un tipo de carne, un tipo de queso, y un tipo de pan sirve el restaurán?

(1) 10
(2) 25
(3) 30
(4) 75

4 El siguiente histograma demuestra la altura de los estudiantes en la clase de Salud de Kyra.

Use este espacio para sus cómputos.



¿Cuál es el número total de estudiantes en la clase?

(1) 5
(2) 15
(3) 16
(4) 209

5 El perímetro de $\Delta A'B'C'$, la imagen de ΔABC, es dos veces mas grande que el perímetro de ΔABC. ¿Que tipo de transformación ha sucedido?

(1) dilatación
(2) translación
(3) rotación
(4) reflección

6 Si $n + 4$ representa un entero impar, el próximo entero impar más grande está representado por

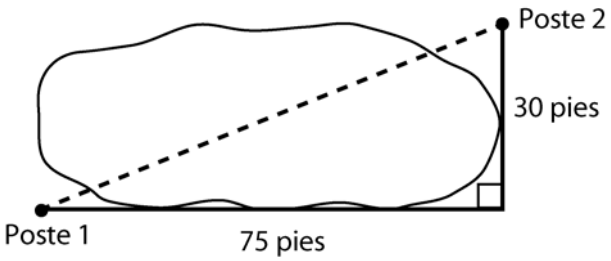
(1) $n + 2$
(2) $n + 3$
(3) $n + 5$
(4) $n + 6$

7 ¿Cuál es la solución de la ecuación $\frac{x}{5} + \frac{x}{2} = 14$?

(1) {4}
(2) {10}
(3) {20}
(4) {49}

Use este espacio para sus cómputos.

8 La Compañia de Comunicaciones NuFone tiene que tirar una línea de teléfono entre dos postes que están a lados opuestos de un lago, como se enseña en el diagrama siguiente. El largo y el ancho de el lago son 75 pies y 30 pies, respectivamente.



¿Cuál es la distancia que hay entre los dos postes, redondeado al pie más cercano?

(1) 105
(2) 81
(3) 69
(4) 45

9 La imagen del punto (3,–5) bajo la translación que cambia (x,y) a $(x-1,y-3)$ es:

(1) (–4,8)
(2) (–3,15)
(3) (2,8)
(4) (2,–8)

10 ¿Cuál letra tiene punto de simetría pero *no* línea de simetría?

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

11 ¿Cuál expresión es equivalente a x^{-4}?

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

12 Si $x^3 < x < \frac{1}{x}$, entonces x podría ser igual a:

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

13 ¿Cuál afirmación es lógicamente equivalente a la declaración “si tu eres un elefante, entonces tu no olvidas”?

(1) Si tu no olvidas, entonces eres un elefante.
(2) Si tu no olvidas, entonces no eres un elefante.
(3) Si tu eres un elefante, entonces olvidas.
(4) Si tu olvidas, entonces no eres un elefante.

Use este espacio para sus cómputos.

14 ¿Cuál es la suma, en grados, de las medidas de los ángulos interiores de un pentágono?

(1) 180
(2) 360
(3) 540
(4) 900

15 ¿Cuántos diferentes equipos de tres miembros cada uno, pueden ser seleccionados de un grupo de siete estudiantes?

(1) 1
(2) 35
(3) 210
(4) 5,040

16 ¿Cuál es el inverso multiplicativo de $\frac{3}{4}$?

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

17 Sean sabe el largo de la base, b, y el área, A, de una ventana triangular en su recámara. ¿Cuál fórmula podría el usar para encontrar la altura, h, de esta ventana?

(1) $h = 2A - b$
(2) $h = \frac{A}{2b}$
(3) $h = (2A)(b)$
(4) $h = \frac{2A}{b}$

Use este espacio para sus cómputos.

18 La expresión $-|-7|$ es equivalente a:

(1) 1
(2) 0
(3) 7
(4) –7

19 En la clase de inglés de la Sra.Wright, 16 estudiantes están en la banda, 7 estudiantes practican deportes, 3 estudiantes participan en las dos actividades, y 9 estudiantes no están en la banda y no practican deportes. ¿Cuántos estudiantes hay en la clase de inglés de la Sra. Wright?

(1) 10
(2) 26
(3) 29
(4) 35

20 ¿Cuál es el conjunto de soluciones de la ecuación $x^2 - 5x + 6 = 0$?

(1) {–6,1}
(2) {6,–1}
(3) {–2,–3}
(4) {2,3}

21 ¿Si los puntos medios en los lados de un triángulo están conectados, el área del nuevo triángulo formado representa qué parte del área del triángulo original?

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

22 ¿Cuál ecuación representa una línea que está paralela a la línea cuya ecuación es $2x + 3y = 12$?

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

23 Cuando $3x^2 - 8x$ es sustraido de $2x^2 + 3x$, la diferencia es:

(1) $-x^2 + 11x$
(2) $x^2 - 11x$
(3) $-x^2 - 5x$
(4) $x^2 - 5x$

Use este espacio para sus cómputos.

24 Las coordenadas del punto R son $(-3,2)$ y las coordenadas del punto T son $(4,1)$. ¿Cuál es la longitud de $\overline{RT}$?

(1) $2\sqrt{2}$
(2) $5\sqrt{2}$
(3) $4\sqrt{3}$
(4) $\sqrt{10}$

25 Un consejo de estudiantes tiene siete oficiales, de los cuales cinco son hembras y dos son varones. Si dos oficiales son escogidos al azar para asistir a una reunión con el/la director/a, ¿cuál es la probabilidad que el primer oficial que escojan es una hembra y el segundo es un varón?

(1) $\frac{10}{42}$
(2) $\frac{2}{7}$
(3) $\frac{7}{14}$
(4) $\frac{7}{13}$

26 ¿Cuál expresión tiene el valor *más pequeño*?

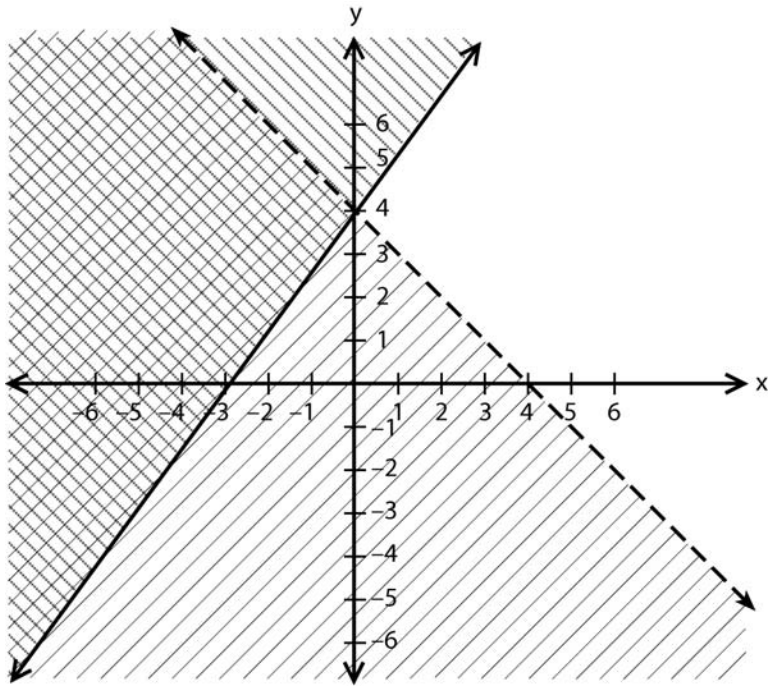
(1) $-\pi$
(2) $-\sqrt{10}$
(3) $\frac{-16}{5}$
(4) -3.02

27 ¿Cuántos puntos son equidistantes de dos líneas paralelas y también equidistantes de dos puntos sobre una de las líneas?

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

28 ¿Cuál punto está en el conjunto de soluciones del sistema de desigualdades que se muestra en la siguiente gráfica?

Use este espacio para sus cómputos.



(1) (0,4)
(2) (2,4)
(3) (−4,1)
(4) (4,−1)

29 Expresada en su forma más simple $(3x^3)(2y)^2(4x^4)$ es equivalente a:

(1) $24x^{12}y^2$
(2) $24x^7y^2$
(3) $48x^{12}y^2$
(4) $48x^7y^2$

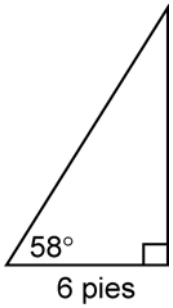
30 Cuando $\sqrt{72}$ es expresada en la forma más simple de $a\sqrt{b}$, ¿cuál es el valor de a?

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

Parte II

Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. Detalladamente indique los pasos necesarios, incluyendo las substituciones en 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. [10]

31 El siguiente diagrama, una escalera recostada contra un edificio hace un ángulo de 58° con el suelo. Si la distancia desde el pie de la escalera al edificio son 6 pies, encuentra, al *pie más cercano*, que tan alto la escalera llega al edificio.?



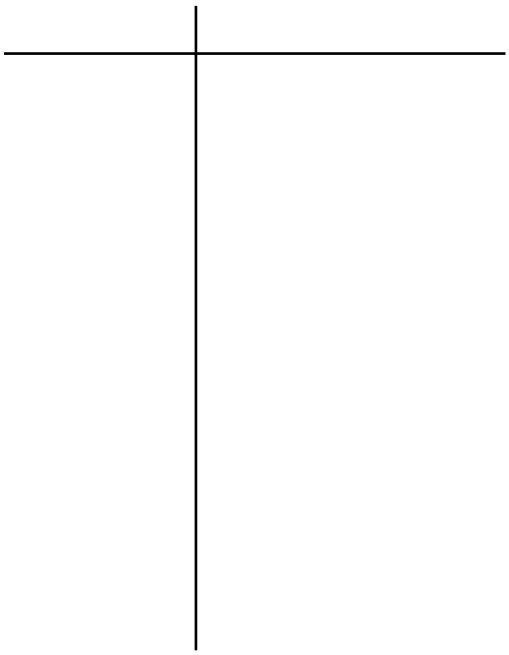
32 La fotografia favorita de Fran, tiene 6 pulgadas de largo y 4 pulgadas de ancho. Ella quiere que le hagan un poster con dimensiones que son similares a las de la foto. Ella determinó que el poster debería tener un largo de 24 pulgadas. ¿Cuántas pulgadas de ancho va a tener el poster?

33 En el rectángulo $ABCD$, $AC = 3x + 15$ y $BD = 4x - 5$. Encuentre el largo de $\overline{AC}$.

34 José quiere construir un corral triangular para su conejo mascota. El ya tiene medidas y cortadas tres tablas que miden 7 pies, 8 pies, y 16 pies. Explique porqué José no puede construir un corral en forma triangular con los lados de 7 pies, 8 pies, y 16 pies.

35 Construya un diagrama de tallo y hoja (stem-and-leaf plot) listando los marcadores de abajo en forma ascendente.

15, 25, 28, 32, 39, 40, 43, 26, 50, 75, 65, 19, 55, 72, 50



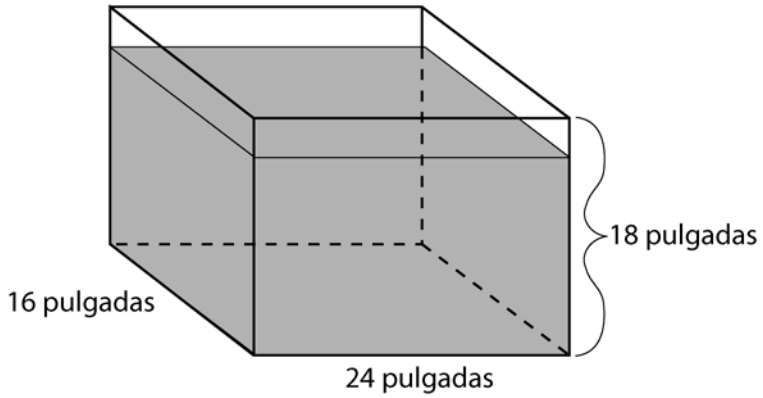
Parte III

Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 3 puntos. Muy claramente indique 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 Encuentre todos los enteros impares negativos que satisfagan la siguiente desigualdad:

$$-3x+1\leq 17$$

37 Como lo demuestra el diagrama siguiente, el largo, ancho, y alto de la pecera de Richard son 24 pulgadas, 16 pulgadas, y 18 pulgadas, respectiamente. Richard está llenando la pecera con agua usando una manguera a razón de 500 pulgadas cúbicas por minuto. ¿Cuánto le tomará, al *minuto más cercano*, llenar la pecera a una profundidad de 15 pulgadas?



(Dibujo no a escala)

Parte IV

Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 4 puntos. Claramente indique 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 ΔABC, la medida del $\angle B$ es 21 menos que cuatro veces la medida del $\angle A$, la medida del $\angle C$ es 1 más que cinco veces la medida del $\angle A$. Encuentre la medida, en grados, de *cada* uno de los ángulos de ΔABC.

39 Los boletos para un recital de danza cuestan $5.00 para adultos y $2.00 para niños/as. Si el total de boletos vendidos fue 295 y la cantidad total recolectada fue de $1,220 dolares, ¿cuántos boletos de adultos se vendieron?[Solamente una solución algebraica puede recibir credito completo.]

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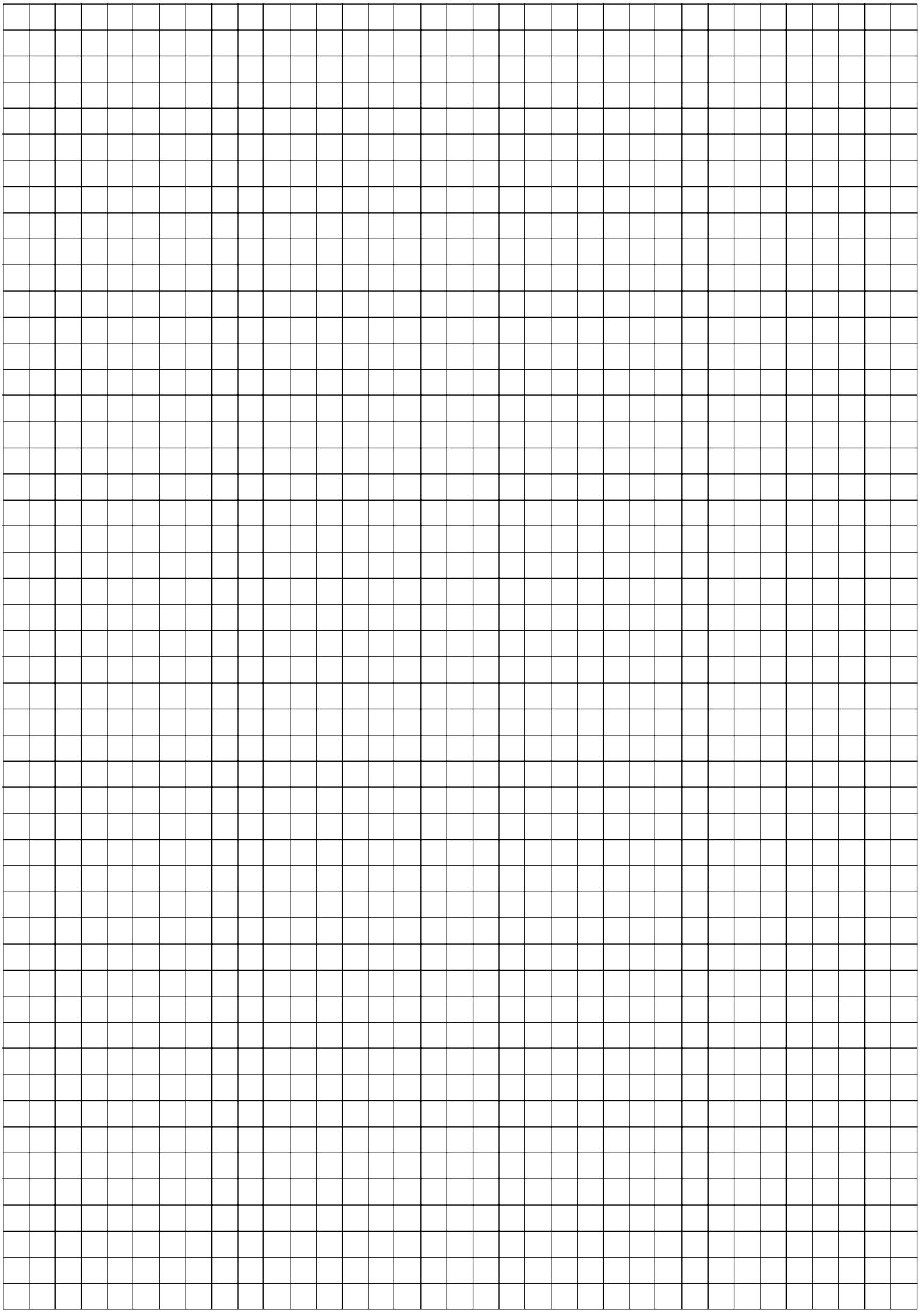
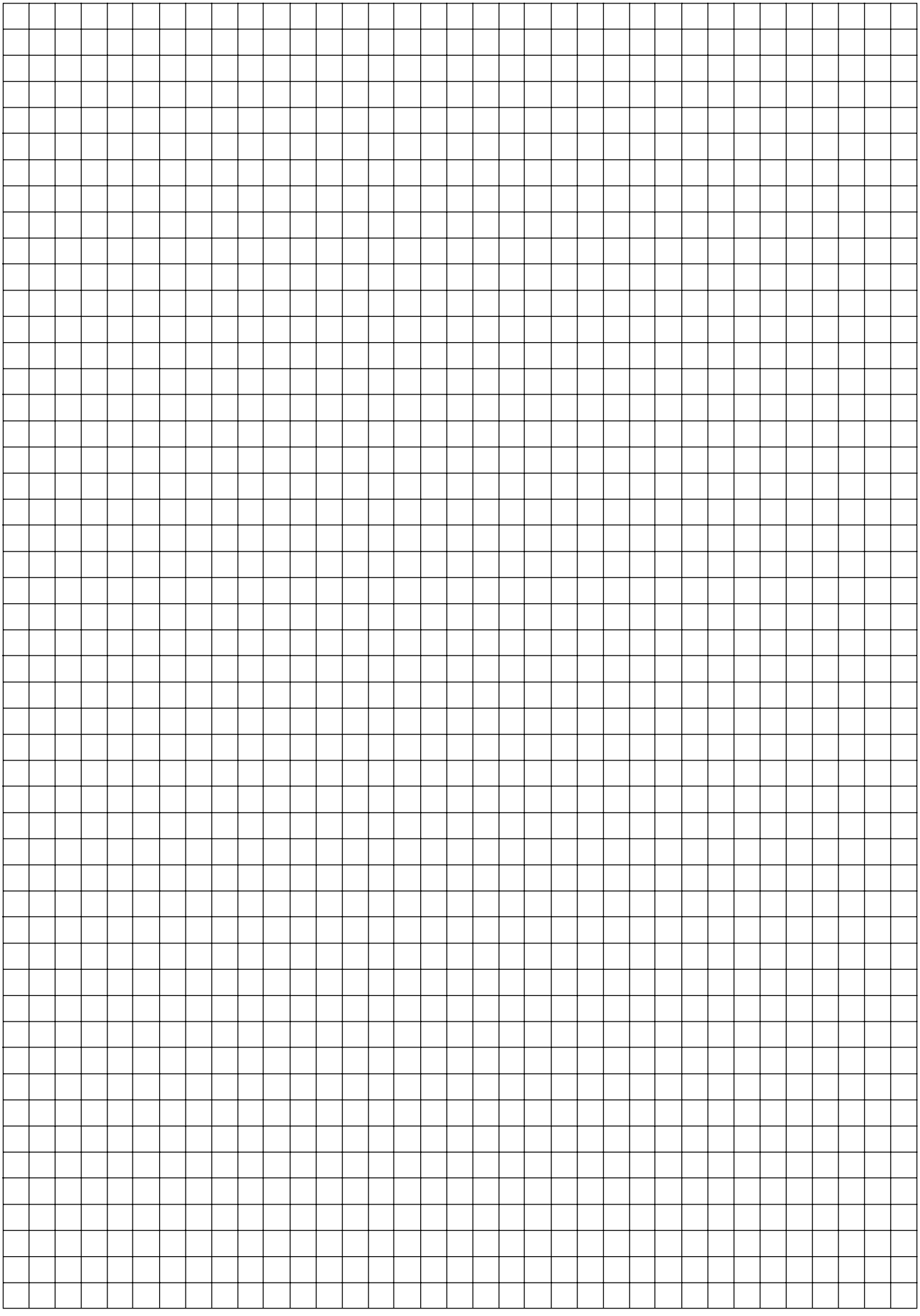
Papel Borrador Cuadriculado — Esta hoja no será calificada



Papel Borrador Cuadriculado — Esta hoja no será calificada



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The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATEMÁTICAS A

Martes , 25 de Enero, 2005 — 1:15 a 4:15 p.m., solamente

HOJA DE RESPUESTAS

Estudiante ..... Sexo: ☐ Masculino ☐ Femenino 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 xamen.

Por la presente afirmo, al terminarse este examen, que no tenía ningún cocnocimiento ilegal de las preguntas o de las respuestas antes del examen y que no he dado ni he recibido ayuda en contestar ninguna de las preguntas durante el examen.

Rompa aquí

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)

Rompa aqui

Rompa aqui

MATHEMATICS A

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Tuesday, January 25, 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 Tuesday, January 25, 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) 2	(6) 4	(11) 1	(16) 2	(21) 1	(26) 3
(2) 1	(7) 3	(12) 4	(17) 4	(22) 2	(27) 1
(3) 3	(8) 2	(13) 4	(18) 4	(23) 1	(28) 3
(4) 3	(9) 4	(14) 3	(19) 3	(24) 2	(29) 4
(5) 1	(10) 2	(15) 2	(20) 4	(25) 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. 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]** 10, and appropriate work is shown.

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

or

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

or

[1] Appropriate work is shown, but the length of the ladder is found.

or

[1] 10, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(32) **[2]** 16, and appropriate work is shown, such as $\frac{6}{4} = \frac{24}{x}$ or a labeled diagram.

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

or

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

or

[1] An incorrect proportion is written, but it is solved appropriately.

or

[1] 16, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(33) **[2]** 75, and appropriate work is shown, such as $3x + 15 = 4x - 5$.

[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 showing $\overline{AC}$ and $\overline{BD}$ as congruent opposite sides.

or

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

or

[1] A correct equation is written and solved for x, but the length of $\overline{AC}$ is not found.

or

[1] An incorrect equation of equal difficulty, such as $3x + 15 + 4x - 5 = 180$, is solved appropriately, and an appropriate length of $\overline{AC}$ is found.

or

[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.

(34) **[2]** The statements $7 + 8 = 15$ and $15 \not> 16$ are written or the explanation is given that the sum of any two sides of a triangle must be greater than the third side.

[1] An explanation is written that includes a reference to the triangle inequality, but the explanation is not complete or an incorrect conclusion is stated.

[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]** A correct stem-and-leaf plot is drawn, including a key.

[1] The data are arranged correctly, but incorrect labels are written on the stem-and-leaf columns. [Columns do not need to be labeled for a full-credit response, but full credit may not be awarded if the columns are labeled incorrectly.]

or

[1] The data are listed in the stem-and-leaf plot, but not in ascending order.

or

[1] One or two of the scores are left out of the stem-and-leaf plot.

or

[1] Duplicate values are left out of the stem-and-leaf plot.

[0] Incorrect labels are written on the stem-and-leaf columns, and scores are left out of the plot.

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 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]** –5, –3, –1, and appropriate work is shown, such as solving the inequality 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, and the inequality $x \geq -5\frac{1}{3}$ is written, but no further correct work is shown.

or

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

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

or

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

or

[1] The trial-and-error method is attempted and at least six systematic trials and appropriate checks are shown, but the solutions are not found.

or

[1] –5, –3, –1, but no work or only one trial with an appropriate check is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

(37) **[3]** 12, and appropriate work is shown, such as calculating volume = 5,760 in^3 and dividing by 500 in^3.

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

or

[2] The volume is found incorrectly by multiplying $24 \times 16 \times 18$, but it is divided by 500 and rounded appropriately, resulting in an answer of 14.

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

or

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

or

[1] The volume of 5,760 is found correctly, but no further correct work is shown.

or

[1] 12, 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]** $m\angle A = 20$, $m\angle B = 59$, and $m\angle C = 101$, and appropriate work is shown.

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

or

[3] A correct equation is written and solved, and the correct measures for the angles 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] A correct equation is written and solved for x, but the measures of the angles are not found.

or

[2] An incorrect equation of equal difficulty is solved appropriately, and the three angles are found.

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

or

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

or

[1] $m\angle A = 20$, $m\angle B = 59$, and $m\angle C = 101$, but no work is shown.

[0] $m\angle A = 20$ *or* $m\angle B = 59$ *or* $m\angle C = 101$, 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]** 210, and appropriate work is shown, such as a system of equations or the linear equation $5x + 2(295 - x) = 1{,}220$.

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

or

[3] Appropriate work is shown, but the number of children's tickets is found as the answer.

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

or

[2] 210, but a method other than an algebraic solution is used.

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

or

[1] The correct system of equations or linear equation is written, but no further correct work is shown.

or

[1] 210, 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	1, 13, 19
Number and Numeration	12, 16, 18, 26
Operations	5, 9, 10, 11, 23, 29, 30
Modeling/Multiple Representation	2, 6, 14, 17, 27, 33, 34, 39
Measurement	4, 8, 21, 24, 31, 32, 35, 37
Uncertainty	3, 15, 25
Patterns/Functions	7, 20, 22, 28, 36, 38

Regents Examination in Mathematics A

January 2005

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

The *Chart for Determining the Final Examination Score for the January 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 Tuesday, January 25, 2005. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students' final scores for this administration.