

MATEMÁTICAS A

Jueves, 16 de agosto de 2007 — 8:30 a 11:30 a.m., solamente

Escriba su nombre en letras de molde:

Escriba el nombre de su escuela en letras de molde:

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

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

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

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

Aviso. . .

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

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

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

Parte I

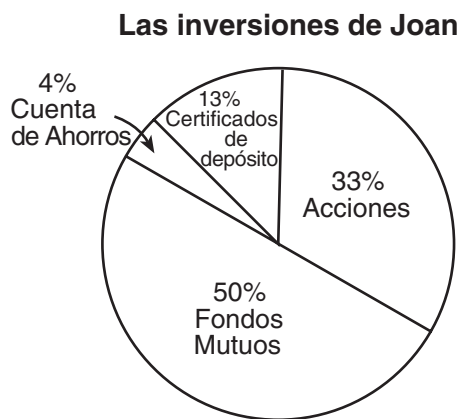
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. No se dará crédito parcial. Para cada pregunta, escriba en la hoja separada de respuestas, el número que precede la palabra o expresión que completa mejor el enunciado o que contesta mejor la pregunta. [60]

Utilice este espacio para sus cálculos.

- 1 Dados los enunciados verdaderos: “ t es un múltiplo de 3” y “ t es par”, ¿cuál podría ser un valor de t ?

- (1) 8 (3) 15
(2) 9 (4) 24

- 2 El siguiente gráfico circular muestra de qué manera invirtió Joan su dinero.

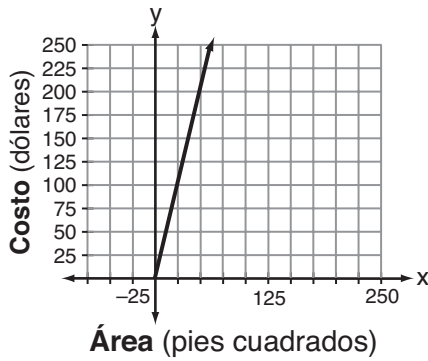


Si ella invirtió un total de \$12,000, ¿cuánto dinero invirtió en certificados de depósito?

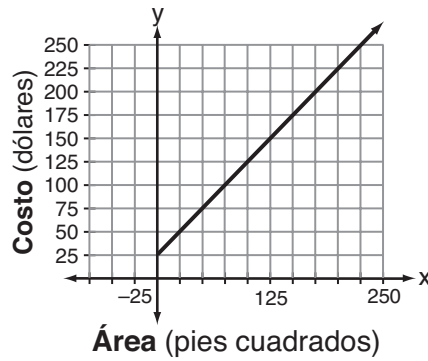
- (1) \$1,560 (3) \$15,600
(2) \$9,230 (4) \$92,308

**Utilice este espacio
para sus cálculos.**

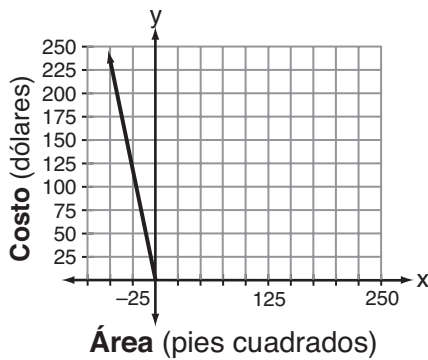
- 3 Super Painters cobra \$1.00 por pie cuadrado más un costo adicional de \$25.00 por pintar una sala. Si x representa el área de las paredes de la sala de Francesca, en pies cuadrados, e y representa el costo en dólares, ¿qué gráfico representa mejor el costo de pintarle la sala?



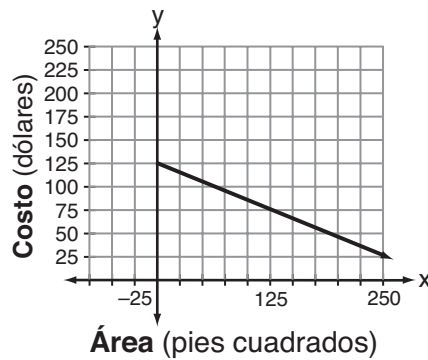
(1)



(3)



(2)



(4)

- 4 El puesto de helados de Jen y Barry tiene tres tipos de conos, seis sabores de helados y cuatro clases de aderezos (sprinkles). Si una porción consiste en un cono, un sabor de helado y un tipo aderezo, ¿cuántas porciones diferentes son posibles?

(1) 90

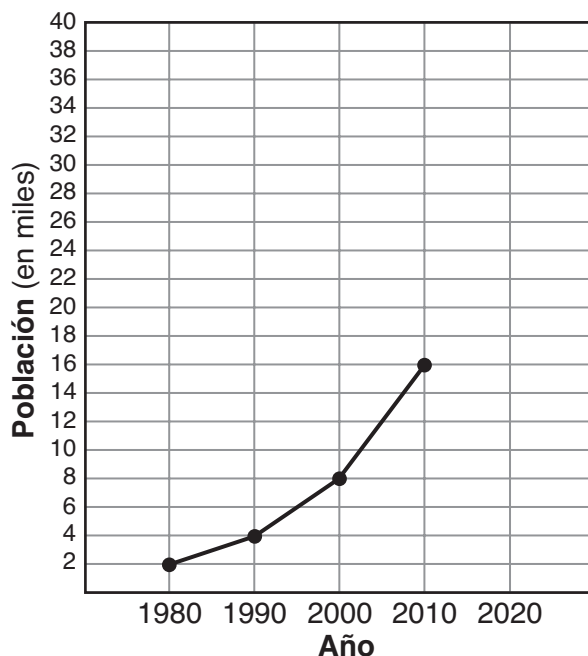
(3) ${}_{13}C_3$

(2) 72

(4) ${}_{13}P_3$

**Utilice este espacio
para sus cálculos.**

- 5** El crecimiento poblacional de Boomtown se muestra en el siguiente gráfico.



Si continúa el mismo ritmo de crecimiento poblacional, ¿cuál será la población de Boomtown en el año 2020?

- | | |
|------------|------------|
| (1) 20,000 | (3) 40,000 |
| (2) 32,000 | (4) 64,000 |
- 6** Si $a + 3b = 13$ y $a + b = 5$, el valor de b es
- | | |
|-------|---------|
| (1) 1 | (3) 4.5 |
| (2) 7 | (4) 4 |
- 7** Un cable de 20 pies de longitud conecta la parte superior de una asta de bandera a un punto en el suelo que está situado a 16 pies de la base de la asta. ¿Cuánto mide la asta de bandera?
- | | |
|-------------|-------------|
| (1) 8 pies | (3) 12 pies |
| (2) 10 pies | (4) 26 pies |

Utilice este espacio
para sus cálculos.

8 En la ecuación $\frac{1}{4}n + 5 = 5\frac{1}{2}$, n es igual a

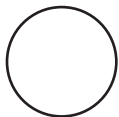
(1) 8

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

(2) 2

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

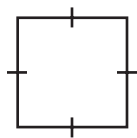
9 ¿Qué figura geométrica *no* tiene ninguna línea de simetría?



(1)



(3)



(2)



(4)

10 La suma de $8x^2 - x + 4$ y $x - 5$ es

(1) $8x^2 + 9$

(3) $8x^2 - 2x + 9$

(2) $8x^2 - 1$

(4) $8x^2 - 2x - 1$

11 Un factor de la expresión $x^2y^2 - 16$ es

(1) $xy - 4$

(3) $x^2 - 4$

(2) $xy - 8$

(4) $x^2 + 8$

12 ¿Cuál es la suma de $\sqrt{50}$ y $\sqrt{8}$?

(1) $\sqrt{58}$

(3) $9\sqrt{2}$

(2) $7\sqrt{2}$

(4) $29\sqrt{2}$

**Utilice este espacio
para sus cálculos.**

- 13** ¿Cuáles son las coordenadas del punto $(2,-3)$ después de que se refleja sobre el eje x ?

(1) $(2,3)$ (3) $(-2,-3)$
(2) $(-2,3)$ (4) $(-3,2)$

- 14** El siguiente diagrama de tallo y hoja representa el puntaje de los exámenes de Ben este año.

6	5	8				
7	2	3	3	3	3	9
8	1	3	3	6	7	
9	6	9	9			

Clave: $7 \mid 2 = 72$

¿Cuál es la mediana del puntaje de este conjunto de datos?

(1) 73 (3) 80
(2) 79 (4) 81

- 15** El vídeo de la película *Star Wars* recaudó \$193,500,000 en tarifas de alquiler durante su primer año. Expresado en una notación científica, el número de dólares recaudados es

(1) 1935×10^8 (3) 1.935×10^6
(2) 193.5×10^6 (4) 1.935×10^8

- 16** En la familia Ambrose, las edades de los tres hijos son tres enteros pares consecutivos. Si la edad del hijo menor está representada por $x + 3$, ¿qué expresión representa la edad del hijo mayor?

(1) $x + 5$ (3) $x + 7$
(2) $x + 6$ (4) $x + 8$

Utilice este espacio
para sus cálculos.

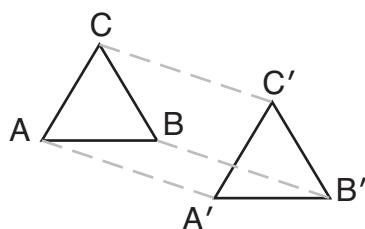
17 Si $t < \sqrt{t}$, t podría ser

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

18 ¿Qué número es irracional?

- (1) $\frac{5}{4}$ (3) $\sqrt{121}$
(2) $0.\overline{3}$ (4) π

19 En el siguiente diagrama, $\Delta A'B'C'$ es la imagen de ΔABC y $\Delta A'B'C' \cong \Delta ABC$.



¿Qué tipo de transformación se muestra en el diagrama?

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

20 La expresión ${}_8C_3$ es equivalente a

- (1) ${}_8C_5$ (3) ${}_8P_3$
(2) $\frac{8!}{3!}$ (4) ${}_8P_5$

- 21 El siguiente diagrama muestra la posición inicial de la aguja giratoria en un juego de mesa.



Utilice este espacio
para sus cálculos.

¿Cómo aparece esta aguja giratoria después de una rotación de 270° en sentido contrario de las agujas del reloj en torno del punto P ?



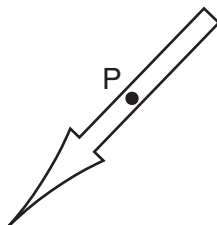
(1)



(3)



(2)



(4)

- 22 ¿Qué ecuación es equivalente a $3x + 4y = 15$?

(1) $y = \frac{15 - 3x}{4}$

(3) $y = 15 - 3x$

(2) $y = \frac{3x - 15}{4}$

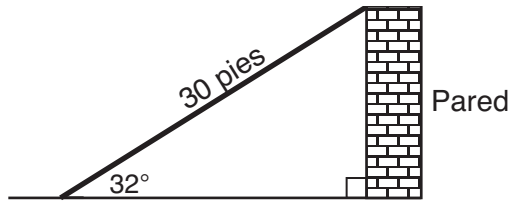
(4) $y = 3x - 15$

**Utilice este espacio
para sus cálculos.**

23 Cuando se grafican en el plano coordenado, las ecuaciones $y = 2x^2 + 4x + 5$ y $x^2 + y^2 = 36$ forman

- (1) una parábola y una línea recta
- (2) una parábola y un círculo
- (3) dos parábolas
- (4) dos círculos

24 El siguiente diagrama muestra una rampa de 30 pies de longitud inclinada contra una pared de un sitio de una construcción.



Si la rampa forma un ángulo de 32° con el suelo, ¿a qué altura del suelo, expresando a la *decima más cercana*, se encuentra la cima de la rampa?

- (1) 15.9 pies
- (2) 18.7 pies
- (3) 25.4 pies
- (4) 56.6 pies

25 ¿Qué ecuación ilustra la propiedad asociativa?

- (1) $a(1) = a$
- (2) $a + b = b + a$
- (3) $a(b + c) = (ab) + (ac)$
- (4) $(a + b) + c = a + (b + c)$

26 ¿Cuál es la longitud del segmento lineal que une los puntos cuyas coordenadas son (4,7) y (-3,5)?

- (1) $\sqrt{5}$
- (2) $\sqrt{53}$
- (3) $\sqrt{193}$
- (4) $3\sqrt{6}$

27 ¿Qué expresión representa el número de combinaciones diferentes de 8 letras que pueden hacerse con las letras de la palabra “SAVANNAH” si cada letra se usa sólo una vez?

(1) $\frac{8!}{5!}$

(3) ${}_8P_5$

(2) $\frac{8!}{3!2!}$

(4) $8!$

28 El segmento lineal AB tiene una pendiente de $\frac{3}{4}$. Si las coordenadas del punto A son $(2,5)$, las coordenadas del punto B podrían ser

(1) $(6,8)$

(3) $(-1,1)$

(2) $(5,9)$

(4) $(6,2)$

29 ¿Cuál *no* es una propiedad de todos los triángulos similares?

(1) Los ángulos correspondientes son congruentes.

(2) Los lados correspondientes son congruentes.

(3) Los perímetros están en la misma razón que los lados correspondientes.

(4) Las alturas están en la misma razón que los lados correspondientes.

30 La expresión $\left(\frac{3}{4}\right)^2 \cdot \left(\frac{1}{4}\right)^{-2}$ es equivalente a

(1) $\frac{9}{16}$

(3) 3

(2) $\frac{9}{256}$

(4) 9

Parte II

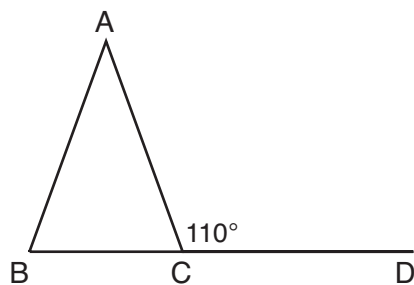
Conteste todas las preguntas en esta parte. Cada respuesta correcta recibirá 2 puntos. Indique claramente los pasos necesarios, incluyendo las sustituciones a las fórmulas apropiadas, diagramas, gráficos, tablas, etc. Para todas las preguntas de esta parte, una respuesta numérica correcta, que no demuestre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

31 Resolver para x : $5(x - 2) = 2(10 + x)$

32 Thelma y Laura comienzan un negocio de cortar césped y compran una cortadora de césped por \$225. Tienen planeado cobrar \$15 por cortar un césped. ¿Cuál es el número *mínimo* de céspedes que tienen que cortar si quieren obtener una ganancia de *por lo menos* \$750?

33 ¿Cuál es la solución positiva de la ecuación $4x^2 - 36 = 0$?

- 34 En el siguiente diagrama del triángulo isósceles ABC , $\overline{AB} \cong \overline{AC}$, y el ángulo exterior $ACD = 110^\circ$. ¿Cuál es $m\angle BAC$?



35 En el rombo $ABCD$, la medida, en pulgadas, de $\overline{AB}$ es $3x + 2$ y $\overline{BC}$ es $x + 12$. Encuentre el número de pulgadas de longitud de $\overline{DC}$.

Parte III

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

- 36** El viaje de Manhattan a Montauk Point es de 120 millas por tren o por automóvil. Un tren realiza el viaje en 2 horas, mientras que un automóvil realiza el viaje en $2\frac{1}{2}$ horas. ¿Cuán más rápido, en millas por hora, es el promedio de velocidad del tren que el promedio de velocidad del automóvil?

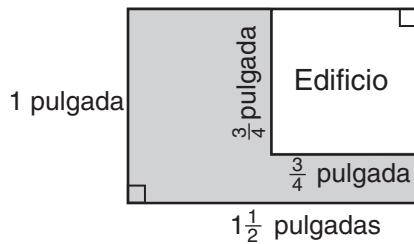
- 37** En el siguiente diagrama, el pueblo C yace sobre la carretera recta p . Dibuje los puntos que están a 6 millas del pueblo C . Después dibuje los puntos que están a 3 millas de la carretera p . ¿Cuántos puntos satisfacen ambas condiciones?



Parte IV

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

- 38 El siguiente diagrama representa un dibujo a escala de la propiedad donde está ubicado el negocio de Brendan. Él tiene que comprar sal de roca para derretir el hielo en el estacionamiento (área sombreada) alrededor de su edificio. Una bolsa de sal de roca cubre un área de 1,500 pies cuadrados. ¿Cuántas bolsas de sal de roca tiene que comprar Brendan para echarle sal a todo el estacionamiento?



Escala: $\frac{1}{4}$ pulgada = 18 pies

39 Dado el enunciado: “Si vivo en Albany, entonces soy un neoyorquino”.

En los espacios que se proporcionan a continuación, escriba el inverso, el converso y el contrapositivo de este enunciado.

Inverso: _____

Converso: _____

Contrapositivo: _____

¿Qué condicional es lógicamente equivalente a su enunciado original?

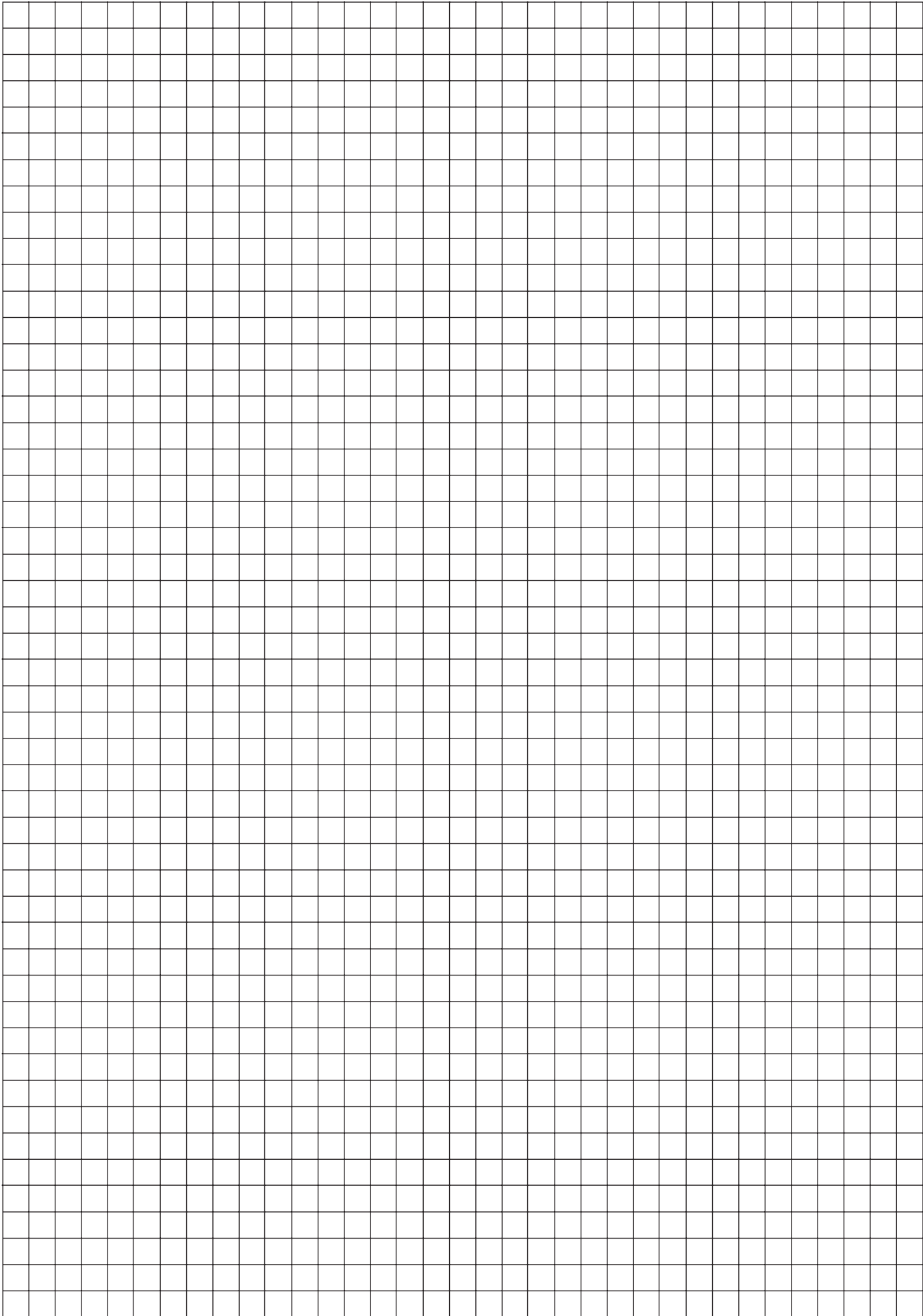
inverso

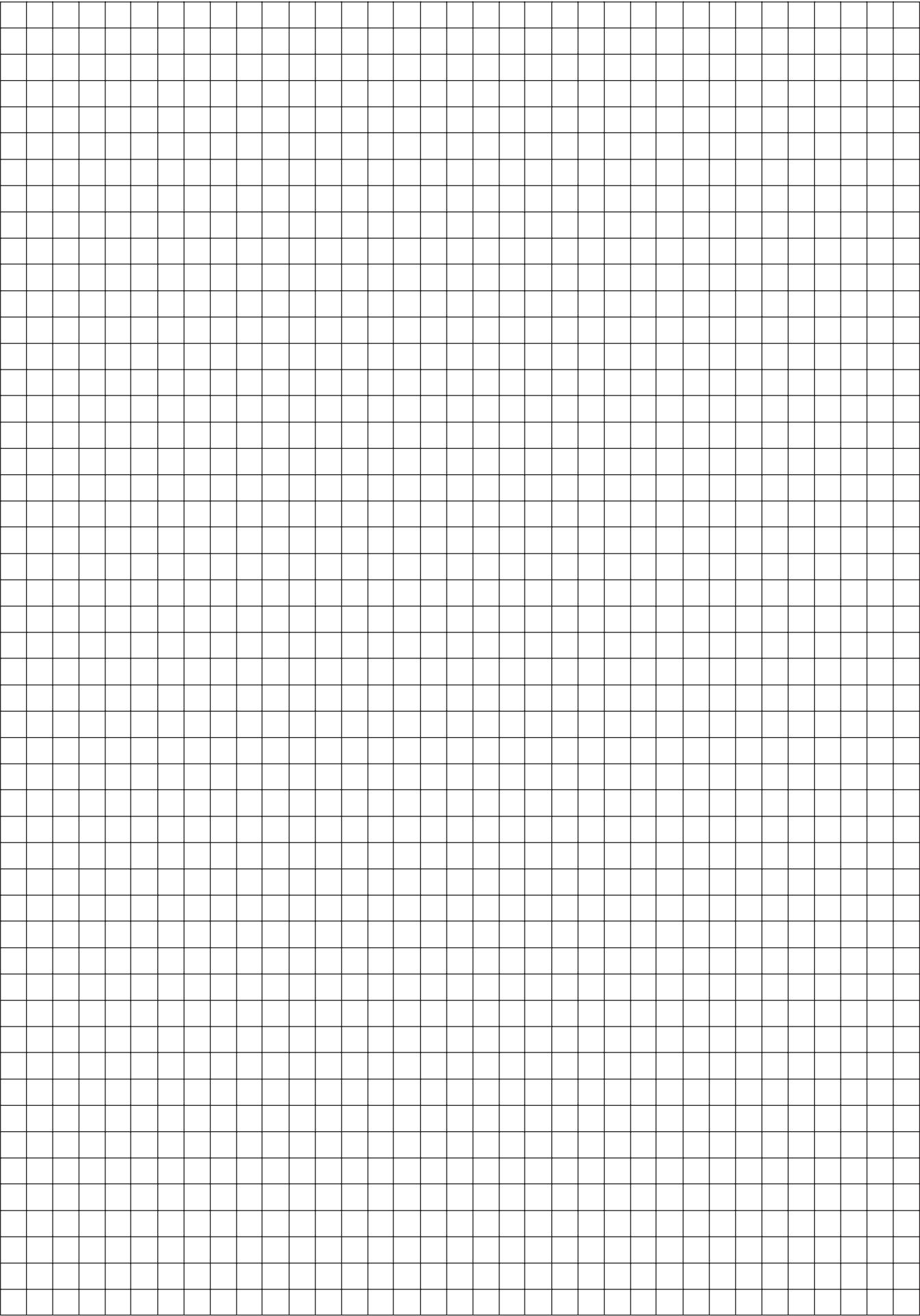
converso

contrapositivo

Desprender por la línea perforada

Desprender por la línea perforada





Desprender por la línea perforada

Desprender por la línea perforada

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 agosto de 2007 — 8:30 a 11:30 a.m., solamente

HOJA DE RESPUESTAS

Estudiante Sexo: ☐ Masculino ☐ Femenino Grado

Profesor Escuela

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

Parte I

Conteste todas las 30 preguntas de esta parte.

1	9	17	25
2	10	18	26
3	11	19	27
4	12	20	28
5	13	21	29
6	14	22	30
7	15	23	
8	16	24	

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

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

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

Firma

MATHEMATICS A			
Question	Maximum Credit	Credits Earned	Rater's/Scorer's Initials
Part I 1–30	60		
Part II 31	2		
32	2		
33	2		
34	2		
35	2		
Part III 36	3		
37	3		
Part IV 38	4		
39	4		
Maximum Total	84		

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

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Total Raw Score	Checked by	Scaled Score (from conversion chart)
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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, August 16, 2007 — 8:30 to 11:30 a.m., only

SCORING KEY

Mechanics of Rating

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

Use only *red* ink or *red* pencil in rating Regents papers. Do *not* attempt to correct the student's work by making insertions or changes of any kind. Use check marks to indicate student errors.

Unless otherwise specified, mathematically correct variations in the answers will be allowed. Units need not be given when the wording of the questions allows such omissions.

Each student's answer paper is to be scored by a minimum of three mathematics teachers. On the back of the student's detachable answer sheet, raters must enter their initials in the boxes next to the questions they have scored and also write their name in the box under the heading "Rater's/Scorer's Name."

Raters should record the student's scores for all questions and the total raw score on the student's detachable answer sheet. Then the student's total raw score should be converted to a scaled score by using the conversion chart that will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Thursday, August 16, 2007. The student's scaled score should be entered in the box provided on the student's detachable answer sheet. The scaled score is the student's final examination score.

Part I

Allow a total of 60 credits, 2 credits for each of the following. Allow credit if the student has written the correct answer instead of the numeral 1, 2, 3, or 4.

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

Updated information regarding the rating of this examination may be posted on the New York State Education Department's web site during the rating period. Check this web site <http://www.emsc.nysed.gov/osa/> and select the link "Examination Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents examination period.

General Rules for Applying Mathematics Rubrics

I. General Principles for Rating

The rubrics for the constructed-response questions on the Regents Examinations in Mathematics A and Mathematics B are designed to provide a systematic, consistent method for awarding credit. The rubrics are not to be considered all-inclusive; it is impossible to anticipate all the different methods that students might use to solve a given problem. Each response must be rated carefully using the teacher's professional judgment and knowledge of mathematics; all calculations must be checked. The specific rubrics for each question must be applied consistently to all responses. In cases that are not specifically addressed in the rubrics, raters must follow the general rating guidelines in the publication *Information Booklet for Scoring the Regents Examinations in Mathematics A and Mathematics B*, use their own professional judgment, confer with other mathematics teachers, and/or contact the consultants at the State Education Department for guidance. During each Regents examination administration period, rating questions may be referred directly to the Education Department. The contact numbers are sent to all schools before each administration period.

II. Full-Credit Responses

A full-credit response provides a complete and correct answer to all parts of the question. Sufficient work is shown to enable the rater to determine how the student arrived at the correct answer.

When the rubric for the full-credit response includes one or more examples of an acceptable method for solving the question (usually introduced by the phrase "such as"), it does **not** mean that there are no additional acceptable methods of arriving at the correct answer. Unless otherwise specified, mathematically correct alternative solutions should be awarded credit. The only exceptions are those questions that specify the type of solution that must be used; e.g., an algebraic solution or a graphic solution. A correct solution using a method other than the one specified is awarded half the credit of a correct solution using the specified method.

III. Appropriate Work

Full-Credit Responses: The directions in the examination booklet for all the constructed-response questions state: "Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, charts, etc." The student has the responsibility of providing the correct answer **and** showing how that answer was obtained. The student must "construct" the response; the teacher should not have to search through a group of seemingly random calculations scribbled on the student paper to ascertain what method the student may have used.

Responses With Errors: Rubrics that state "Appropriate work is shown, but ..." are intended to be used with solutions that show an essentially complete response to the question but contain certain types of errors, whether computational, rounding, graphing, or conceptual. If the response is incomplete, i.e., an equation is written but not solved or an equation is solved but not all of the parts of the question are answered, appropriate work has **not** been shown. Other rubrics address incomplete responses.

IV. Multiple Errors

Computational Errors, Graphing Errors, and Rounding Errors: Each of these types of errors results in a 1-credit deduction. Any combination of two of these types of errors results in a 2-credit deduction. No more than 2 credits should be deducted for such mechanical errors in any response. The teacher must carefully review the student's work to determine what errors were made and what type of errors they were.

Conceptual Errors: A conceptual error involves a more serious lack of knowledge or procedure. Examples of conceptual errors include using the incorrect formula for the area of a figure, choosing the incorrect trigonometric function, or multiplying the exponents instead of adding them when multiplying terms with exponents. A response with one conceptual error can receive no more than half credit.

If a response shows repeated occurrences of the same conceptual error, the student should not be penalized twice. If the same conceptual error is repeated in responses to other questions, credit should be deducted in each response.

If a response shows two (or more) different major conceptual errors, it should be considered completely incorrect and receive no credit.

If a response shows one conceptual error and one computational, graphing, or rounding error, the teacher must award credit that takes into account both errors: i.e., awarding half credit for the conceptual error and deducting 1 credit for each mechanical error (maximum of two deductions for mechanical errors).

Part II

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

- (31) [2] 10, and appropriate work is shown, such as solving the equation or trial and error with at least three trials and appropriate checks.

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

or

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

or

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

or

[1] 10, but no work or fewer than three trials and 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] 65, and appropriate work is shown, such as solving the inequality $15x \geq 225 + 750$ or trial and error with at least three trials and appropriate checks.

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

or

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

or

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

or

[1] 65, but no work or fewer than three trials and 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.

- (33) [2] 3, and appropriate work is shown, such as factoring or trial and error with at least three trials and appropriate checks.

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

or

[1] Appropriate work is shown, but one conceptual error is made, such as not rejecting the negative root.

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] 3, but no work or fewer than three trials and appropriate checks are shown.

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

- (34) [2] 40, and appropriate work is shown, such as $x = 180 - (70 + 70)$ or correctly labeling all the angles in the 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] A correct equation is written, but no further correct work is shown.

or

[1] The measures of $\angle ACB$ and $\angle ABC$ are both found to be 70° , but no further correct work is shown.

or

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

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.

(35) [2] 17, and appropriate work is shown, such as solving the equation $x + 12 = 3x + 2$.

[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] A correct equation is written and solved for x , but no further correct work is shown.

or

[1] 17, 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] 12, and appropriate work is shown, such as finding the rates of both vehicles and then subtracting 48 from 60.

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

or

[2] The rates of both vehicles are found correctly, and appropriate work is shown, but they are not subtracted.

or

[2] The rates of both vehicles are found correctly, and the correct difference is found, but no work is 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 rates of both vehicles are found correctly, but no work is shown, and the difference is not found.

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.

- (37) [3] 4, and an appropriate sketch is drawn that shows a circle with C as its center and a radius of 6 and two parallel lines, one 3 units above and one 3 units below line p .

- [2] An appropriate sketch is drawn, but the answer 4 is not found.

or

- [2] Only one locus is drawn correctly, but the appropriate number of points of intersection is found.

- [1] Only one locus is drawn correctly, and no further correct work is shown.

or

- [1] Both loci are drawn incorrectly, but the appropriate number of points of intersection is found.

or

- [1] 4, but no work or sketch 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] 4, and appropriate work is shown.

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

or

[3] Appropriate work is shown to find 4,860, the area of the parking lot, but no further correct work is shown.

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

or

[2] Appropriate work is shown, but one conceptual error is made, such as using an incorrect conversion.

or

[2] The property has been divided into appropriate sections (e.g., 108×72 , the entire property, and 54×54 , the building) and correct areas are found, but no further correct work is shown.

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

or

[1] 4, 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.

(39) [4] Contrapositive, and all three statements are written correctly.

[3] Contrapositive, and only two of the statements are written correctly.

or

[3] All three statements are written correctly, but the contrapositive is not identified.

[2] Contrapositive, and only one statement is written correctly.

or

[2] Only two statements are written correctly, and the contrapositive is not identified.

[1] All three statements are written incorrectly, but the contrapositive is identified.

or

[1] Only one statement is written correctly, and the contrapositive is not identified.

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

Regents Examination in Mathematics A

August 2007

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

The Chart for Determining the Final Examination Score for the August 2007 Regents Examination in Mathematics A will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Thursday, August 16, 2007. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students' final scores for this administration.

Submitting Teacher Evaluations of the Test to the Department

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

1. Go to www.emsc.nysed.gov/osa/exameval.
2. Select the test title.
3. Complete the required demographic fields.
4. Complete each evaluation question and provide comments in the space provided.
5. Click the SUBMIT button at the bottom of the page to submit the completed form.



Regents Examination in Mathematics A August 2007

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

Raw Score	Scaled Score	Raw Score	Scaled Score	Raw Score	Scaled Score
84	100	55	80	27	57
83	99	54	79	26	56
82	99	53	79	25	55
81	98	52	78	24	54
80	97	51	77	23	52
79	97	50	77	22	51
78	96	49	76	21	50
77	95	48	76	20	48
76	94	47	75	19	47
75	94	46	74	18	45
74	93	45	74	17	43
73	92	44	73	16	42
72	91	43	72	15	40
71	90	42	71	14	38
70	89	41	71	13	36
69	89	40	70	12	34
68	88	39	69	11	32
67	87	38	68	10	30
66	86	37	67	9	28
65	86	36	67	8	26
64	85	35	66	7	23
63	84	34	65	6	20
62	84	33	64	5	18
61	83	32	63	4	15
60	83	31	62	3	12
59	82	30	61	2	8
58	81	29	60	1	4
57	81	28	59	0	0
56	80				

To determine the student's final examination score, find the student's total test raw score in the column labeled "Raw Score" and then locate the scaled score that corresponds to that raw score. The scaled score is the student's final examination score. Enter this score in the space labeled "Scaled Score" on the student's answer sheet.

All student answer papers that receive a scaled score of 60 through 64 **must** be scored a second time. For the second scoring, a different committee of teachers may score the student's paper or the original committee may score the paper, except that no teacher may score the same open-ended questions that he/she scored in the first rating of the paper.

Because scaled scores corresponding to raw scores in the conversion chart change from one examination to another, it is crucial that for each administration, the conversion chart provided for that administration be used to determine the student's final score. The chart above is usable only for this administration of the Mathematics A Examination.