The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

INTEGRATED ALGEBRA

Thursday, June 16, 2011—1:15 to 4:15 p.m., only

Student Name: _____

School Name: _____

Print your name and the name of your school on the lines above.

A separate answer sheet for Part I has been provided to you. Follow the instructions from the proctor for completing the student information on your answer sheet.

This examination has four parts, with a total of 39 questions. You must answer all questions in this examination. Record your answers to the Part I multiple-choice questions on the separate answer sheet. Write your answers to the questions in Parts II, III, and IV directly in this booklet. All work should be written in pen, except graphs and drawings, which should be done in pencil. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. The formulas that you may need to answer some questions in this examination are found at the end of the examination. This sheet is perforated so you may remove it from this booklet.

 Scrap paper is not permitted for any part of this examination, but you may use the blank spaces in this booklet as scrap paper. A perforated sheet of scrap graph paper is provided at the end of this booklet for any question for which graphing may be helpful but is not required. You may remove this sheet from this booklet. Any work done on this sheet of scrap graph paper will *not* be scored.

When you have completed the examination, you must sign the statement printed at the end of the answer sheet, indicating that you had no unlawful knowledge of the questions or answers prior to the examination and that you have neither given nor received assistance in answering any of the questions during the examination. Your answer sheet cannot be accepted if you fail to sign this declaration.

Notice…

A graphing calculator and a straightedge (ruler) must be available for you to use while taking this examination.

The use of any communications device is strictly prohibited when taking this examination. If you use any communications device, no matter how briefly, your examination will be invalidated and no score will be calculated for you.

DO NOT OPEN THIS EXAMINATION BOOKLET UNTIL THE SIGNAL IS GIVEN.

Part I

Answer all 30 questions in this part. Each correct answer will receive 2 credits. No partial credit will be allowed. For each question, write on the separate answer sheet the numeral preceding the word or expression that best completes the statement or answers the question. [60]

1 The expression $x^2 - 36y^2$ is equivalent to

(1) $(x - 6y)(x - 6y)$ (3) $(x + 6y)(x - 6y)$

(2) $(x - 18y)(x - 18y)$ (4) $(x + 18y)(x - 18y)$

2 The legs of an isosceles right triangle each measure 10 inches. What is the length of the hypotenuse of this triangle, to the *nearest tenth of an inch*?

(1) 6.3   (3) 14.1

(2) 7.1   (4) 17.1

3 The expression $\dfrac{12w^9y^3}{-3w^3y^3}$ is equivalent to

(1) $-4w^6$ (3) $9w^6$

(2) $-4w^3y$ (4) $9w^3y$

4 The spinner shown in the diagram below is divided into six equal sections.
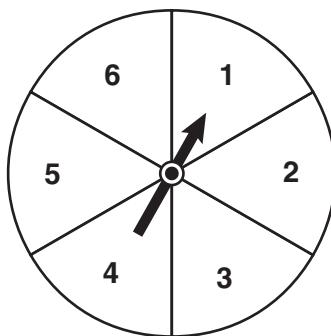
Which outcome is *least* likely to occur on a single spin?

(1) an odd number   (3) a perfect square

(2) a prime number   (4) a number divisible by 2

5 What are the factors of the expression $x^2 + x - 20$?

(1) $(x + 5)$ and $(x + 4)$ (3) $(x - 5)$ and $(x + 4)$

(2) $(x + 5)$ and $(x - 4)$ (4) $(x - 5)$ and $(x - 4)$

**6** What is $3\sqrt{250}$ expressed in simplest radical form?

(1) $5\sqrt{10}$ (3) $15\sqrt{10}$

(2) $8\sqrt{10}$ (4) $75\sqrt{10}$

7 A survey is being conducted to determine which school board candidate would best serve the Yonkers community. Which group, when randomly surveyed, would likely produce the most bias?

(1) 15 employees of the Yonkers school district

(2) 25 people driving past Yonkers High School

(3) 75 people who enter a Yonkers grocery store

(4) 100 people who visit the local Yonkers shopping mall

8 An 8-foot rope is tied from the top of a pole to a stake in the ground, as shown in the diagram below.
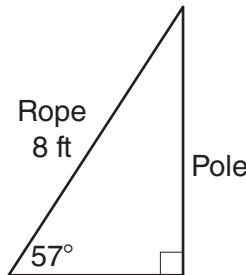
If the rope forms a 57° angle with the ground, what is the height of the pole, to the *nearest tenth of a foot*?

(1) 4.4   (3) 9.5

(2) 6.7   (4) 12.3

9 How many different ways can five books be arranged on a shelf?

(1) 5   (3) 25

(2) 15   (4) 120

10 What is the slope of the line passing through the points $(-2,4)$ and $(3,6)$?

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

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

11 Which type of function is represented by the graph shown below?

(1) absolute value   (3) linear

(2) exponential   (4) quadratic
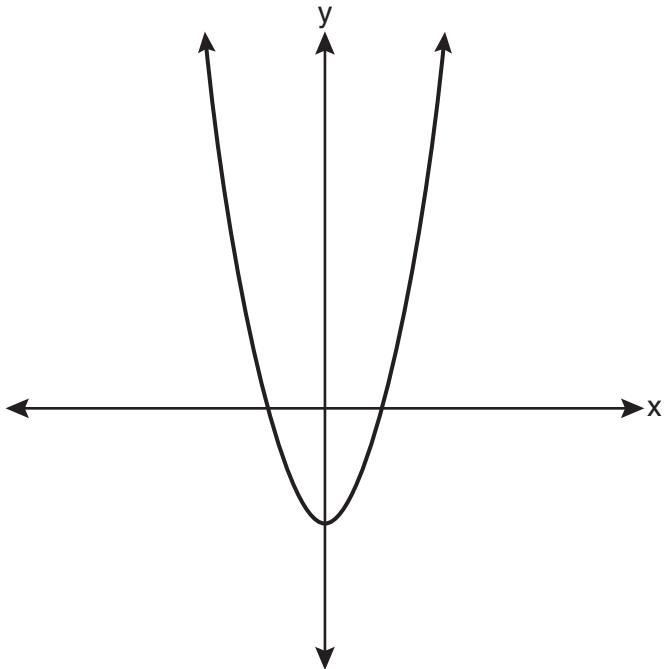
12 Which equation represents a line parallel to the y-axis?

(1) $y = x$ (3) $x = -y$

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

13 Melissa graphed the equation $y = x^2$ and Dave graphed the equation $y = -3x^2$ on the same coordinate grid. What is the relationship between the graphs that Melissa and Dave drew?

(1) Dave's graph is wider and opens in the opposite direction from Melissa's graph.

(2) Dave's graph is narrower and opens in the opposite direction from Melissa's graph.

(3) Dave's graph is wider and is three units below Melissa's graph.

(4) Dave's graph is narrower and is three units to the left of Melissa's graph.

14 In right triangle ABC shown below, $AB = 18.3$ and $BC = 11.2$.
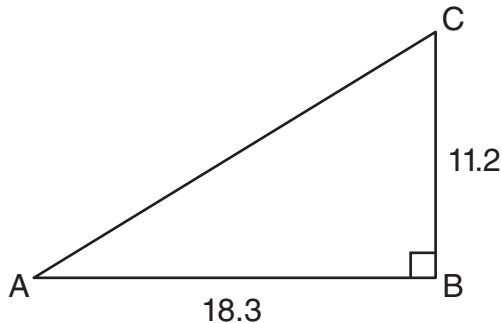
What is the measure of $\angle A$, to the *nearest tenth of a degree*?

(1) 31.5   (3) 52.3

(2) 37.7   (4) 58.5

15 The maximum height and speed of various roller coasters in North America are shown in the table below.

Maximum Speed, in mph, (x)	45	50	54	60	65	70
Maximum Height, in feet, (y)	63	80	105	118	141	107

Which graph represents a correct scatter plot of the data?
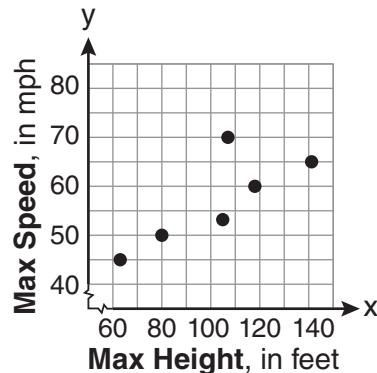
(1)
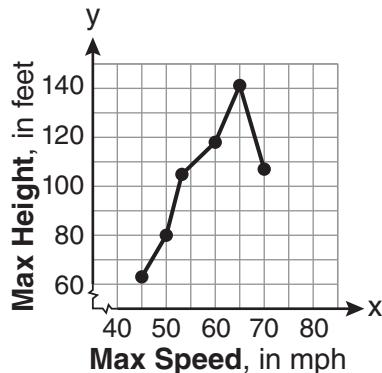
(3)
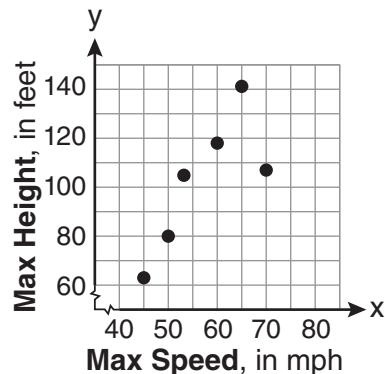
(2)
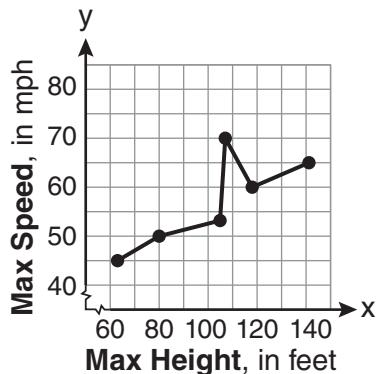
(4)

16 Which set of ordered pairs represents a function?

(1) {(0,4), (2,4), (2,5)}   (3) {(4,1), (6,2), (6,3), (5,0)}

(2) {(6,0), (5,0), (4,0)}   (4) {(0,4), (1,4), (0,5), (1,5)}

17 A hiker walked 12.8 miles from 9:00 a.m. to noon. He walked an additional 17.2 miles from 1:00 p.m. to 6:00 p.m. What is his average rate for the entire walk, in miles per hour?

(1) 3.75

(3) 4.27

(2) 3.86

(4) 7.71

18 Which ordered pair is a solution of the system of equations $y = x + 3$ and $y = x^2 - x$?

(1) (6,9)

(3) (3,−1)

(2) (3,6)

(4) (2,5)

19 Which verbal expression can be represented by $2(x - 5)$?

(1) 5 less than 2 times x

(2) 2 multiplied by x less than 5

(3) twice the difference of x and 5

(4) the product of 2 and x, decreased by 5

20 The dimensions of a rectangle are measured to be 12.2 inches by 11.8 inches. The actual dimensions are 12.3 inches by 11.9 inches. What is the relative error, to the *nearest ten-thousandth*, in calculating the area of the rectangle?

(1) 0.0168

(3) 0.0165

(2) 0.0167

(4) 0.0164

21 An example of an algebraic expression is

(1) $y = mx + b$ (3) $2x + 3y \leq 18$

(2) $3x + 4y - 7$ (4) $(x + y)(x - y) = 25$

22 A study showed that a decrease in the cost of carrots led to an increase in the number of carrots sold. Which statement best describes this relationship?

(1) positive correlation and a causal relationship

(2) negative correlation and a causal relationship

(3) positive correlation and not a causal relationship

(4) negative correlation and not a causal relationship

23 Given: $A = \{3, 6, 9, 12, 15\}$
          $B = \{2, 4, 6, 8, 10, 12\}$

What is the union of sets A and B?

(1) $\{6\}$ (3) $\{2, 3, 4, 8, 9, 10, 15\}$

(2) $\{6, 12\}$ (4) $\{2, 3, 4, 6, 8, 9, 10, 12, 15\}$

24 The value of a car purchased for $20,000 decreases at a rate of 12% per year. What will be the value of the car after 3 years?

(1) $12,800.00   (3) $17,600.00

(2) $13,629.44   (4) $28,098.56

25 For which set of values of x is the algebraic expression $\dfrac{x^2 - 16}{x^2 - 4x - 12}$ undefined?

(1) $\{-6, 2\}$ (3) $\{-4, 4\}$

(2) $\{-4, 3\}$ (4) $\{-2, 6\}$

26 Michael is 25 years younger than his father. The sum of their ages is 53. What is Michael's age?

(1) 14   (3) 28

(2) 25   (4) 39

27 What is the product of (6×10^3), (4.6×10^5), and (2×10^{-2}) expressed in scientific notation?

(1) 55.2×10^6 (3) 55.2×10^7

(2) 5.52×10^7 (4) 5.52×10^{10}

28 Which notation describes $\{1, 2, 3\}$?

(1) $\{x \,|\, 1 \leq x < 3,$ where x is an integer$\}$

(2) $\{x \,|\, 0 < x \leq 3,$ where x is an integer$\}$

(3) $\{x \,|\, 1 < x < 3,$ where x is an integer$\}$

(4) $\{x \,|\, 0 \leq x \leq 3,$ where x is an integer$\}$

29 What is $\dfrac{7}{12x} - \dfrac{y}{6x^2}$ expressed in simplest form?

(1) $\dfrac{7 - y}{6x}$

(3) $-\dfrac{7y}{12x^2}$

(2) $\dfrac{7 - y}{12x - 6x^2}$

(4) $\dfrac{7x - 2y}{12x^2}$

30 When $5x + 4y$ is subtracted from $5x - 4y$, the difference is

(1) 0

(3) $8y$

(2) $10x$

(4) $-8y$

Part II

Answer all 3 questions in this part. Each correct answer will receive 2 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [6]

31 The area of a rectangle is represented by $x^2 - 5x - 24$. If the width of the rectangle is represented by $x - 8$, express the length of the rectangle as a binomial.

32 A method for solving $5(x - 2) - 2(x - 5) = 9$ is shown below. Identify the property used to obtain *each* of the two indicated steps.

$$5(x - 2) - 2(x - 5) = 9$$

(1) $5x - 10 - 2x + 10 = 9$ (1)   _____

(2) $5x - 2x - 10 + 10 = 9$ (2)   _____

$$3x + 0 = 9$$

$$3x = 9$$

$$x = 3$$

33 State the equation of the axis of symmetry and the coordinates of the vertex of the parabola graphed below.
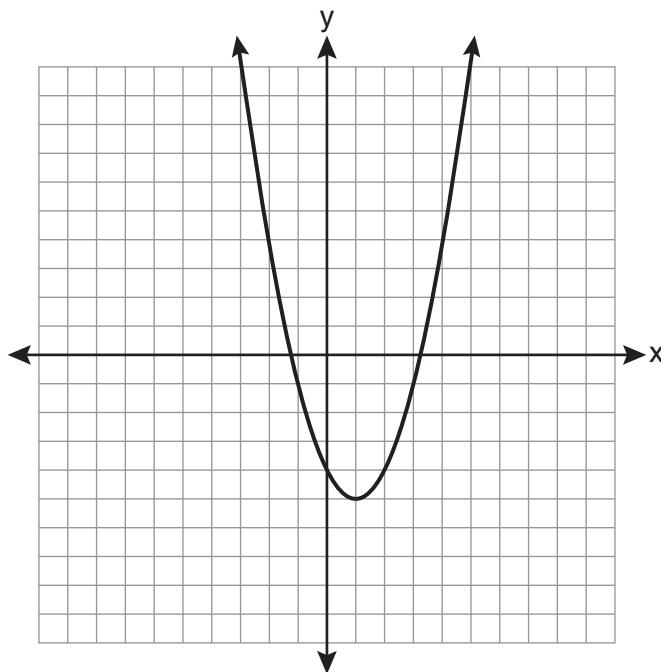
Part III

Answer all 3 questions in this part. Each correct answer will receive 3 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [9]

34 Given the following list of students' scores on a quiz: 5, 12, 7, 15, 20, 14, 7

Determine the median of these scores.

Determine the mode of these scores.

The teacher decides to adjust these scores by adding three points to each score. Explain the effect, if any, that this will have on the median and mode of these scores.

35 Chelsea has $45 to spend at the fair. She spends $20 on admission and $15 on snacks. She wants to play a game that costs $0.65 per game. Write an inequality to find the maximum number of times, x, Chelsea can play the game.

Using this inequality, determine the maximum number of times she can play the game.

36 A plastic storage box in the shape of a rectangular prism has a length of $x + 3$, a width of $x - 4$, and a height of 5.

Represent the surface area of the box as a trinomial in terms of x.

Part IV

Answer all 3 questions in this part. Each correct answer will receive 4 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. [12]

37 Solve algebraically for x: $\dfrac{3}{4} = \dfrac{-(x + 11)}{4x} + \dfrac{1}{2x}$

38 An outfit Jennifer wears to school consists of a top, a bottom, and shoes. Possible choices are listed below.

Tops: T-shirt, blouse, sweater

Bottoms: jeans, skirt, capris

Shoes: flip-flops, sneakers

List the sample space or draw a tree diagram to represent all possible outfits consisting of one type of top, one type of bottom, and one pair of shoes.

Determine how many different outfits contain jeans and flip-flops.

Determine how many different outfits do *not* include a sweater.

39 Solve the following system of inequalities graphically on the set of axes below.

$$3x + y < 7$$
$$y \geq \frac{2}{3}x - 4$$

State the coordinates of a point in the solution set.
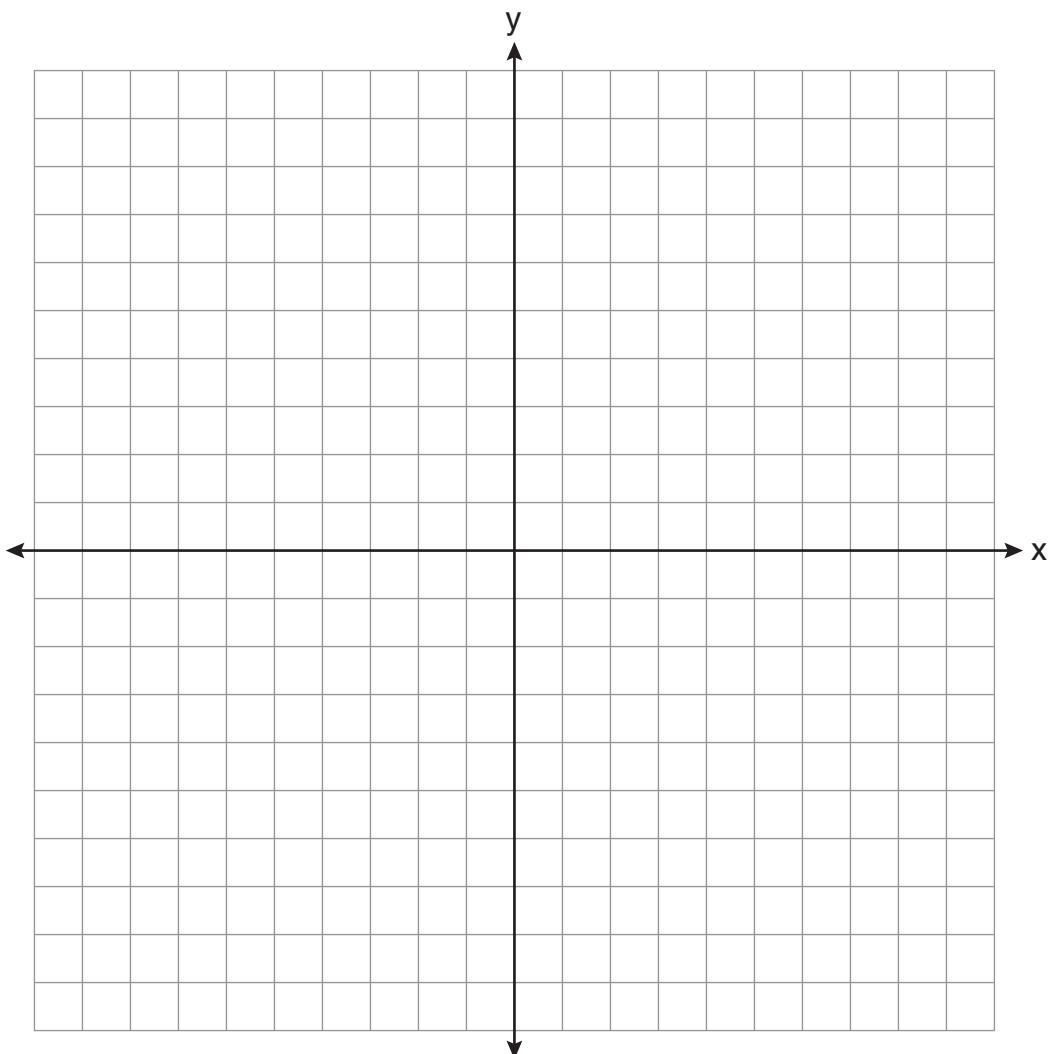
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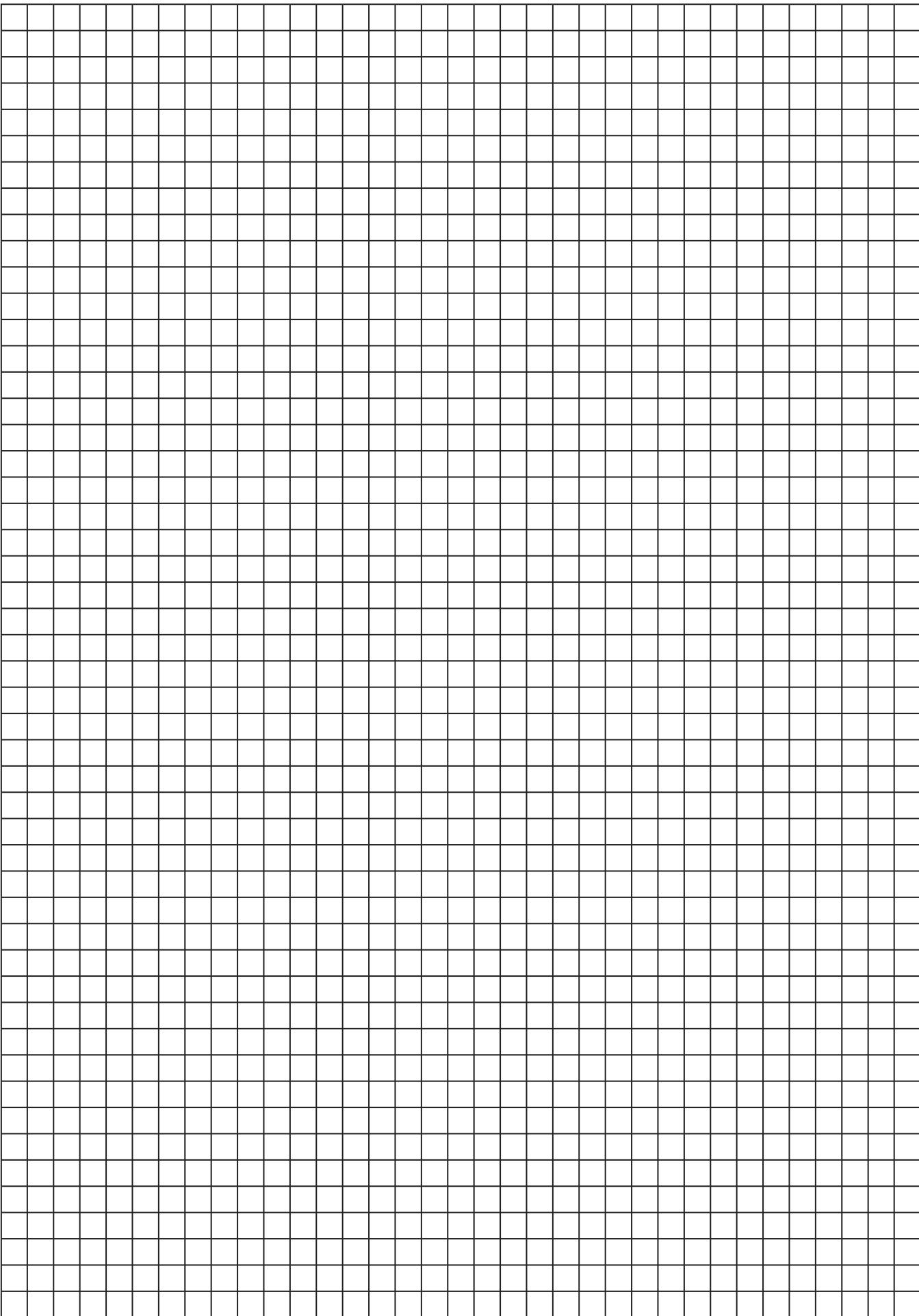
Reference Sheet

Trigonometric Ratios	$\sin A = \dfrac{opposite}{hypotenuse}$
	$\cos A = \dfrac{adjacent}{hypotenuse}$
	$\tan A = \dfrac{opposite}{adjacent}$

| Area | trapezoid | $A = \frac{1}{2}h(b_1 + b_2)$ |

| Volume | cylinder | $V = \pi r^2 h$ |

| Surface Area | rectangular prism | $SA = 2lw + 2hw + 2lh$ |
| | cylinder | $SA = 2\pi r^2 + 2\pi rh$ |

| Coordinate Geometry | $m = \dfrac{\Delta y}{\Delta x} = \dfrac{y_2 - y_1}{x_2 - x_1}$ |

INTEGRATED ALGEBRA

Tear Here

Tear Here

FOR TEACHERS ONLY

REGENTS HIGH SCHOOL EXAMINATION

INTEGRATED ALGEBRA

Thursday, June 16, 2011 — 1:15 to 4:15 p.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*.

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. On the student's separate answer sheet, for each question, record the number of credits earned and the teacher's assigned rater/scorer letter.

Beginning in June 2011, schools are no longer 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/apda/ on Thursday, June 16, 2011. Because scale scores corresponding to raw scores in the conversion chart may 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 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.

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

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 otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(31) **[2]** $x + 3$, and appropriate work is shown.

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

<div align="center">***or***</div>

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

<div align="center">***or***</div>

      [1] $x + 3$, 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.

(32) **[2]** The distributive property in line 1 and commutative property in line 2 are identified.

      [1] One line is identified correctly.

      [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]** $x = 1$ and $(1, -5)$ are stated.

      [1] $x = 1$ or $(1, -5)$ 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.

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]** 12 and 7, and an appropriate explanation is given, such as both the median and mode will increase by 3.

[2] Appropriate work is shown, but one computational error is made, but appropriate values are found for the median and mode, and an appropriate explanation is given.

or

[2] 12 or 7, and an appropriate explanation is given.

or

[2] 12 and 7, but no further correct work is shown.

[1] Appropriate work is shown, but two or more computational errors are made, but appropriate values are found for the median and mode, and an appropriate explanation is given.

or

[1] Appropriate work is shown, but one conceptual error is made, but appropriate values are found for the median and mode, and an appropriate explanation is given.

or

[1] 12 or 7 or an appropriate explanation is given.

[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]** A correct inequality is written and 15, and appropriate work is shown.

[2] Appropriate work is shown, but one computational error is made, but an appropriate number of games is stated.

or

[2] A correct inequality is written and is solved for *x*, but 15 is not stated.

or

[2] 20 + 15 + 0.65*x* = 45 or an equivalent equation is written and is solved for *x*, and 15 is stated.

[1] Appropriate work is shown, but two or more computational errors are made, but an appropriate number of games is stated.

or

[1] Appropriate work is shown, but one conceptual error is made, but an appropriate number of games is stated.

or

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

or

[1] 15, 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]** $2x^2 + 18x - 34$, and appropriate work is shown.

[2] Appropriate work is shown, but one computational error is made, but an appropriate surface area written as a trinomial is found.

or

[2] Appropriate work is shown to find $x^2 + 9x - 17$, but no further correct work is shown.

[1] Appropriate work is shown, but two or more computational errors are made, but an appropriate surface area written as a trinomial is found.

or

[1] Appropriate work is shown, but one conceptual error is made, such as finding the volume, but the answer is written as a trinomial.

or

[1] Appropriate substitutions are made into the formula, but no further correct work is shown.

or

[1] $2x^2 + 18x - 34$, 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 4 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(37) **[4]** $-\dfrac{9}{4}$ or an equivalent answer, and appropriate algebraic work is shown.

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

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

<div align="center">*or*</div>

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

<div align="center">*or*</div>

[2] $3x = -(x + 11) + 2$ or an equivalent equation is written, but no further correct work is shown.

<div align="center">*or*</div>

[2] $-\dfrac{9}{4}$ or an equivalent answer, but a method other than algebraic is used.

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

<div align="center">*or*</div>

[1] $-\dfrac{9}{4}$ or an equivalent answer, 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]** A correct sample space or tree diagram is shown, and 3 and 12 are stated.

[3] Appropriate work is shown, but one computational error is made, but appropriate solutions are stated.

or

[3] A correct sample space or tree diagram is shown, but only 3 or 12 is stated.

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

or

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

or

[2] A correct sample space or tree diagram is shown, but no further correct work is shown.

or

[2] An incomplete sample space or tree diagram of at least 12 outcomes is shown, but appropriate solutions are stated.

[1] An incomplete sample space or tree diagram of at least 12 outcomes is shown, and only one appropriate solution is stated.

or

[1] 3 and 12, but no work is shown.

[0] 3 or 12, 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]** Both inequalities are graphed and shaded correctly, and at least one is labeled, and the coordinates of a point in the solution set are stated correctly.

[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, but the appropriate coordinates of a point in the solution set are stated.

or

[3] Both inequalities are graphed and shaded correctly, and the coordinates of a point in the solution set are stated correctly, but the graphs are not labeled or are labeled incorrectly.

or

[3] Both inequalities are graphed and shaded correctly, and at least one is labeled, but the coordinates of a point in the solution set are not stated or are stated incorrectly.

[2] Appropriate work is shown, but two or more graphing or labeling errors are made, but the appropriate coordinates of a point in the solution set are stated.

or

[2] Appropriate work is shown, but one conceptual error is made, such as graphing the lines $y = -3x + 7$ and $y = \frac{2}{3}x - 4$ and stating $(3, -2)$.

or

[2] Both inequalities are graphed and shaded correctly, but neither is labeled or they are labeled incorrectly, and the coordinates of a point in the solution set 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, but the appropriate coordinates of a point in the solution set are stated.

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

Regents Examination in Integrated Algebra

June 2011

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

The *Chart for Determining the Final Examination Score for the June 2011 Regents Examination in Integrated Algebra* will be posted on the Department's web site at: http://www.p12.nysed.gov/apda/ on Thursday, June 16, 2011. Conversion charts provided for previous administrations of the Integrated Algebra examination 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.

The State Education Department / The University of the State of New York

Regents Examination in Integrated Algebra – June 2011

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

Beginning in June 2011, schools are no longer 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.