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

INTEGRATED ALGEBRA

Thursday, June 14, 2012 — 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.

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]

Use this space for computations.

- 1 In a baseball game, the ball traveled 350.7 feet in 4.2 seconds. What was the average speed of the ball, in feet per second?
 - (1) 83.5

(3) 354.9

(2) 177.5

- (4) 1,472.9
- **2** A survey is being conducted to determine if a cable company should add another sports channel to their schedule. Which random survey would be the *least* biased?
 - (1) surveying 30 men at a gym
 - (2) surveying 45 people at a mall
 - (3) surveying 50 fans at a football game
 - (4) surveying 20 members of a high school soccer team
- **3** The quotient of $\frac{8x^5 2x^4 + 4x^3 6x^2}{2x^2}$ is

$$(1) 16x^7 - 4x^6 + 8x^5 - 12x^4$$

$$(2) \ 4x^7 - x^6 + 2x^5 - 3x^4$$

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

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

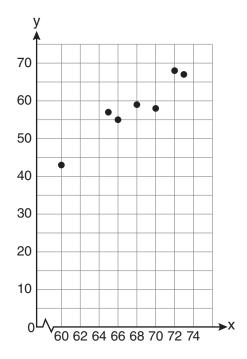
- **4** Marcy determined that her father's age is four less than three times her age. If *x* represents Marcy's age, which expression represents her father's age?
 - (1) 3x 4

(3) 4x - 3

(2) 3(x-4)

 $(4) \ 4 - 3x$

5 A set of data is graphed on the scatter plot below.



This scatter plot shows

- (1) no correlation
- (3) negative correlation
- (2) positive correlation
- (4) undefined correlation

6 Which situation is an example of bivariate data?

- (1) the number of pizzas Tanya eats during her years in high school
- (2) the number of times Ezra puts air in his bicycle tires during the summer
- (3) the number of home runs Elias hits per game and the number of hours he practices baseball
- (4) the number of hours Nellie studies for her mathematics tests during the first half of the school year

Use this space for computations.

7 Brianna's score on a national math assessment exceeded the scores of 95,000 of the 125,000 students who took the assessment. What was her percentile rank?

(1) 6

(3) 31

(2) 24

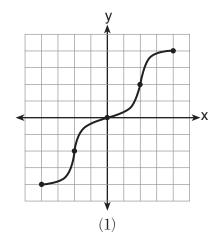
(4) 76

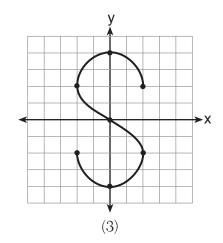
8 If $A = \{0, 1, 3, 4, 6, 7\}$, $B = \{0, 2, 3, 5, 6\}$, and $C = \{0, 1, 4, 6, 7\}$, then $A \cap B \cap C$ is

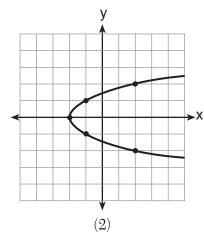
- $(1)\ \{0,\,1,\,2,\,3,\,4,\,5,\,6,\,7\}$
- $(3) \{0, 6\}$
- $(2) \{0, 3, 6\}$

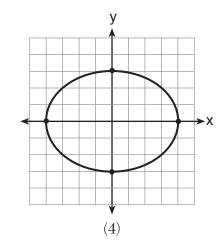
 $(4) \{0\}$

9 Which graph represents a function?









- **10** What is the product of (3x + 2) and (x 7)?
 - $(1) 3x^2 14$
- $(3) \ 3x^2 19x 14$
- (2) $3x^2 5x 14$
- $(4) \ 3x^2 23x 14$
- 11 If five times a number is less than 55, what is the greatest possible integer value of the number?
 - (1) 12

(3) 10

(2) 11

- (4) 9
- 12 The line represented by the equation 2y 3x = 4 has a slope of
 - $(1) -\frac{3}{2}$

(3) 3

(2) 2

- $(4) \frac{3}{2}$
- 13 What is the solution set of the system of equations x + y = 5 and $y = x^2 25$?
 - $(1) \ \{(0,5), (11,-6)\}$
- $(3) \{(-5,0), (6,11)\}$
- $(2) \ \{(5,0), (-6,11)\}$
- $(4) \ \{(-5,10), (6,-1)\}$

- **14** What is the vertex of the parabola represented by the equation $y = -2x^2 + 24x 100$?
 - (1) x = -6

(3) (6,-28)

(2) x = 6

- (4) (-6, -316)
- **15** If k = am + 3mx, the value of m in terms of a, k, and x can be expressed as
 - $(1) \ \frac{k}{a+3x}$

 $(3) \quad \frac{k - am}{3x}$

 $(2) \ \frac{k - 3mx}{a}$

- $(4) \quad \frac{k-a}{3x}$
- **16** Which expression represents $\frac{x^2 3x 10}{x^2 25}$ in simplest form?
 - $(1) \frac{2}{5}$

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

 $(2) \ \frac{x+2}{x+5}$

- $(4) \ \frac{-3x 10}{-25}$
- **17** Which interval notation describes the set $S = \{x | 1 \le x < 10\}$?
 - (1) [1,10]

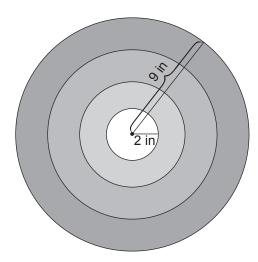
(3) [1,10)

(2) (1,10]

(4) (1,10)

Use this space for computations.

18 The bull's-eye of a dartboard has a radius of 2 inches and the entire board has a radius of 9 inches, as shown in the diagram below.



If a dart is thrown and hits the board, what is the probability that the dart will land in the bull's-eye?

$$(1) \frac{2}{9}$$

(3)
$$\frac{4}{81}$$

$$(2) \frac{7}{9}$$

$$(4) \frac{49}{81}$$

19 What is one-third of 3^6 ?

$$(1) 1^2$$

$$(3) 3^5$$

$$(2) 3^2$$

$$(4) 9^6$$

20 The expression $\frac{2x+13}{2x+6} - \frac{3x-6}{2x+6}$ is equivalent to

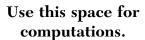
$$(1) \ \frac{-x+19}{2(x+3)}$$

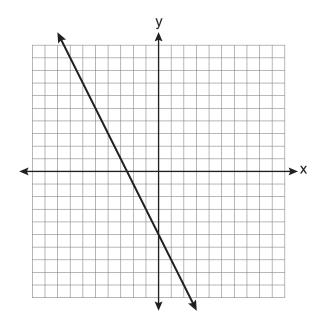
$$(3) \ \frac{5x+19}{2(x+3)}$$

$$(2) \ \frac{-x+7}{2(x+3)}$$

$$(4) \ \frac{5x+7}{4x+12}$$

21 Which equation is represented by the graph below?





$$(1) \ 2y + x = 10$$

$$(3) -2y = 10x - 4$$

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

$$(4) \ 2y = -4x - 10$$

22 Which coordinates represent a point in the solution set of the system of inequalities shown below?

$$y \le \frac{1}{2}x + 13$$

$$4x + 2y > 3$$

$$(1)$$
 $(-4,1)$

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

$$(2)$$
 $(-2,2)$

$$(4)$$
 $(2,-2)$

- **23** The length of one side of a square is 13 feet. What is the length, to the *nearest foot*, of a diagonal of the square?
 - (1) 13

(3) 19

(2) 18

- (4) 26
- **24** In $\triangle ABC$, m $\angle C = 90$. If AB = 5 and AC = 4, which statement is not true?
 - $(1) \cos A = \frac{4}{5}$
- $(3) \sin B = \frac{4}{5}$
- (2) $\tan A = \frac{3}{4}$
- (4) $\tan B = \frac{5}{3}$
- **25** If n is an odd integer, which equation can be used to find three consecutive odd integers whose sum is -3?
 - (1) n + (n + 1) + (n + 3) = -3
 - (2) n + (n+1) + (n+2) = -3
 - (3) n + (n + 2) + (n + 4) = -3
 - (4) n + (n+2) + (n+3) = -3
- **26** When $8x^2 + 3x + 2$ is subtracted from $9x^2 3x 4$, the result is
 - $(1) x^2 2$

 $(3) -x^2 + 6x + 6$

 $(2) 17x^2 - 2$

 $(4) x^2 - 6x - 6$

Use this space for computations.

27 Factored completely, the expression $3x^3 - 33x^2 + 90x$ is equivalent to

$$(1) 3x(x^2 - 33x + 90)$$

(3)
$$3x(x+5)(x+6)$$

(2)
$$3x(x^2 - 11x + 30)$$
 (4) $3x(x - 5)(x - 6)$

$$(4) 3x(x-5)(x-6)$$

28 Elizabeth is baking chocolate chip cookies. A single batch uses $\frac{3}{4}$ teaspoon of vanilla. If Elizabeth is mixing the ingredients for five batches at the same time, how many tablespoons of vanilla will she use?

3 teaspoons = 1 tablespoon

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

(3)
$$3\frac{3}{4}$$

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

$$(4) \ 5\frac{3}{4}$$

29 A car depreciates (loses value) at a rate of 4.5% annually. Greg purchased a car for \$12,500. Which equation can be used to determine the value of the car, V, after 5 years?

(1)
$$V = 12,500(0.55)^5$$

(3)
$$V = 12,500(1.045)^5$$

(2)
$$V = 12,500(0.955)^5$$
 (4) $V = 12,500(1.45)^5$

(4)
$$V = 12,500(1.45)^5$$

30 The cumulative frequency table below shows the length of time that 30 students spent text messaging on a weekend.

Minutes Used	Cumulative Frequency
31–40	2
31–50	5
31–60	10
31–70	19
31–80	30

Which 10-minute interval contains the first quartile?

(1) 31–40

(3) 51–60

(2) 41–50

(4) 61–70

Part II

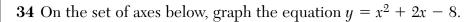
Answer all 3 questions in this part. Each correct answer will receive 2 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [6]

31 Solve the following system of equations algebraically for y :			
	2x + 2y = 9 $2x - y = 3$		

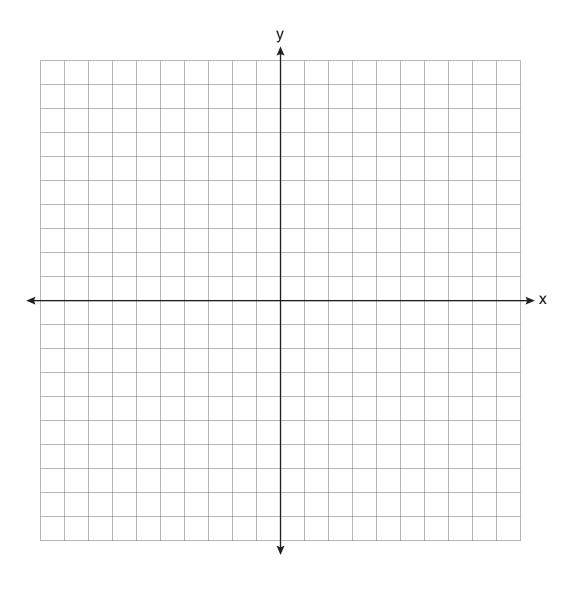
con	ree storage bins contain colored blocks. Bin 1 contains 15 red and 14 blue blocks. Bin 2 ntains 16 white and 15 blue blocks. Bin 3 contains 15 red and 15 white blocks. All of the blocks m the three bins are placed into one box.	
	If one block is randomly selected from the box, which color block would most likely be picked? Justify your answer.	

33 Students calculated the is 7,678.5 square feet. I	area of a playing field to be 8,100 square feet. The actual area of the field find the relative error in the area, to the <i>nearest thousandth</i> .

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. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [9]



Using the graph, determine and state the roots of the equation $x^2 + 2x - 8 = 0$.



35 A 28-foot ladder is leaning against a house. The bottom of the ladder is 6 feet from the base of the house. Find the measure of the angle formed by the ladder and the ground, to the nearest degree.

36 Express $\frac{3\sqrt{75} + \sqrt{27}}{3}$ in simplest radical form.

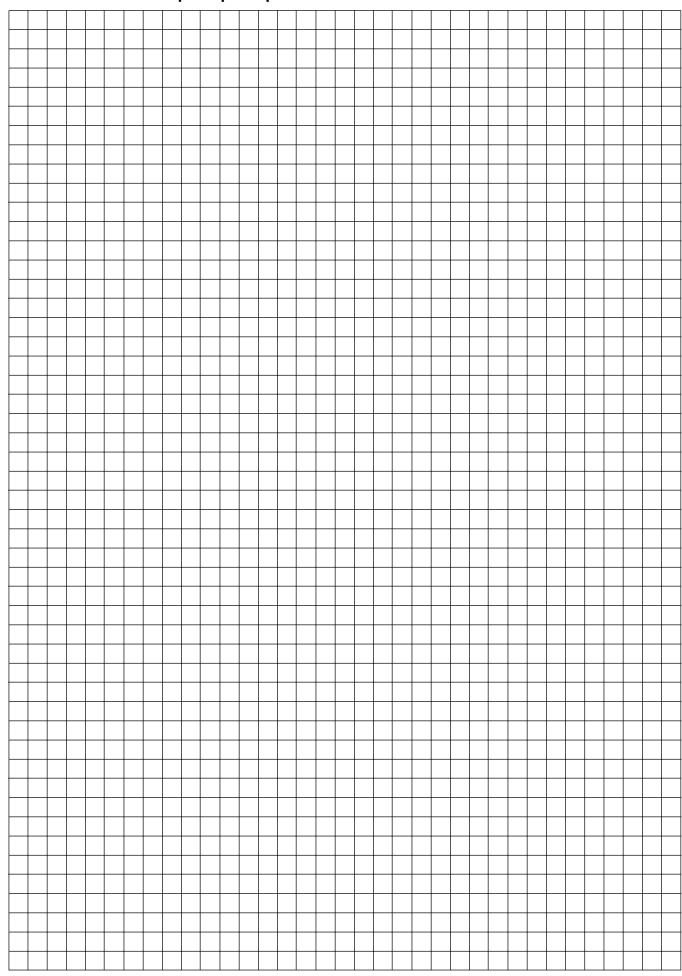
Part IV

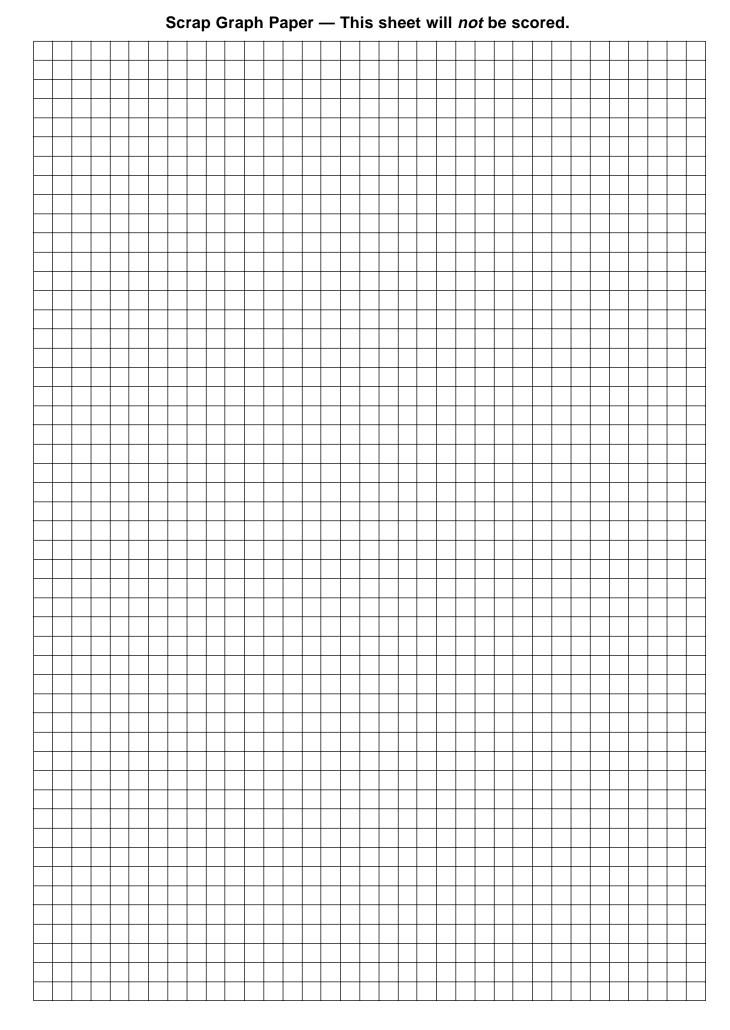
Answer all 3 questions in this part. Each correct answer will receive 4 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [12]

37 Mike buys his ice cream packed in a rectangular prism-shaped carton, while Carol buys hers in a cylindrical-shaped carton. The dimensions of the prism are 5 inches by 3.5 inches by 7 inches. The cylinder has a diameter of 5 inches and a height of 7 inches.
Which container holds more ice cream? Justify your answer.
Determine, to the <i>nearest tenth of a cubic inch</i> , how much <i>more</i> ice cream the larger container holds.

38 Solve algebraically for <i>x</i> : $3(x + 1) - 5x = 12 - (6x - 7)$

Scrap Graph Paper — This sheet will ${\it not}$ be scored.





Tear Here

Reference Sheet

$$\sin A = \frac{opposite}{hypotenuse}$$

Trigonometric Ratios

$$\cos A = \frac{adjacent}{hypotenuse}$$

$$\tan A = \frac{opposite}{adjacent}$$

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

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

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FOR TEACHERS ONLY

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INTEGRATED ALGEBRA

Thursday, June 14, 2012 — 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*.

Do *not* attempt to correct the student's work by making insertions or changes of any kind. In scoring the open-ended questions, use check marks to indicate student errors. If the student's responses for the multiple-choice questions are being hand scored prior to being scanned, the scorer must be careful not to make any stray marks on the answer sheet that might later interfere with the accuracy of the scanning.

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.

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

Raters should record the student's scores for all questions and the total raw score on the student's separate answer sheet. Then the student's total raw score should be converted to a scale score by using the conversion chart that will be posted on the Department's web site at: http://www.p12.nysed.gov/apda/ on Thursday, June 14, 2012. Because scale scores corresponding to raw scores in the conversion chart may change from one administration to another, it is crucial that, for each administration, the conversion chart provided for that administration be used to determine the student's final score. The student's scale score should be entered in the box provided on the student's separate answer sheet. The scale score is the student's final examination score.

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.

11	113	21 4
22	$12\ldots 4\ldots$	22 4
34	$13\ldots 2\ldots$	23 2
41	$14\ldots 3\ldots$	$24\ldots 14\ldots$
52	$15\ldots 1\ldots$	25 3
63	$16\ldots 2\ldots$	$26\ldots 4\ldots$
74	$17 \ldots 3 \ldots$	$27 \dots 4 \dots$
83	$18\ldots 3\ldots$	28 1
91	$19\ldots 3\ldots$	29 2
10 3	20 1	30 3

Updated information regarding the rating of this examination may be posted on the New York State Education Department's web site during the rating period. Check this web site at: http://www.p12.nysed.gov/apda/ and select the link "Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents Examination period.

General Rules for Applying Mathematics Rubrics

I. General Principles for Rating

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

II. Full-Credit Responses

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

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

III. Appropriate Work

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

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

IV. Multiple Errors

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

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

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

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

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

Part II

For each question, use the specific criteria to award a maximum of 2 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

- (31) [2] 2, and appropriate algebraic work is shown.
 - [1] Appropriate work is shown, but one computational error is made, but an appropriate value for y is found.

or

[1] Appropriate work is shown, but one conceptual error is made, but an appropriate value for y is found.

or

[1] Appropriate work is shown to find $x = 2\frac{1}{2}$, but no further correct work is shown.

or

[1] 2, but a method other than algebraic is used.

or

- [1] 2, but no work is shown.
- [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.
- (32) [2] White, and an appropriate justification is given.
 - [1] One computational error is made, but an appropriate color is stated, and an appropriate justification is given.

or

[1] One conceptual error is made, but an appropriate color is stated, and an appropriate justification is given.

- [1] White, but no justification or an incorrect justification 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.

- (33) [2] 0.055, and appropriate work is shown.
 - [1] Appropriate work is shown, but one computational or rounding error is made, but an appropriate relative error is found.

or

[1] Appropriate work is shown, but one conceptual error is made, such as dividing by 8,100, but an appropriate relative error is found.

or

[1] $\frac{8,100-7,678.5}{7,678.5}$ or an equivalent fraction is written, but no further correct work is shown.

- [1] 0.055, but no work is shown.
- [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

Part III

For each question, use the specific criteria to award a maximum of 3 credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

- (34) [3] The equation is graphed correctly, and -4 and 2 are stated.
 - [2] Appropriate work is shown, but one computational or graphing error is made, but appropriate roots are stated.

or

[2] Appropriate work is shown, but only one root is stated correctly.

or

- [2] Appropriate work is shown, but the roots are stated as (-4,0) and (2,0).
- [1] Appropriate work is shown, but two or more computational or graphing errors are made, but appropriate roots are stated.

or

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

or

[1] The equation is graphed correctly, but the roots are not stated or are stated incorrectly.

or

[1] -4 and 2, but a method other than graphic is used.

- [1] -4 and 2, but no work is shown.
- [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

- (35) [3] 78, and appropriate work is shown.
 - [2] Appropriate work is shown, but one computational or rounding error is made, but an appropriate angle measure is stated.

or

- [2] Appropriate work is shown to find $\cos x = \frac{6}{28}$ or an equivalent equation, but no further correct work is shown.
- [1] Appropriate work is shown, but two or more computational or rounding errors are made, but an appropriate angle measure is stated.

or

[1] Appropriate work is shown, but one conceptual error is made, such as using an incorrect trigonometric equation or an incorrectly labeled diagram, but an appropriate angle measure is stated.

or

[1] A correct triangle is drawn and labeled appropriately, but no further correct work is shown.

- [1] 78, 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] $6\sqrt{3}$, and appropriate work is shown.
 - [2] Appropriate work is shown, but one computational or simplification error is made, but an appropriate solution is stated.

or

- [2] Appropriate work is shown to find $\frac{18\sqrt{3}}{3}$, but no further correct work is shown.
- [1] Appropriate work is shown, but two or more computational or simplification errors are made, but an appropriate solution is stated.

or

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

or

[1] Appropriate work is shown to find $\frac{15\sqrt{3} + 3\sqrt{3}}{3}$, but no further correct work is shown.

or

[1] Appropriate work is shown to find $\frac{3\sqrt{75}}{3} = 5\sqrt{3}$ or $\frac{\sqrt{27}}{3} = \sqrt{3}$ or $3\sqrt{75} + \sqrt{27} = 18\sqrt{3}$, but no further correct work is shown.

or

- [1] $6\sqrt{3}$, but no work is shown.
- [0] The answer is expressed as a decimal, and no work is shown.

or

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

Part IV

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

- (37) [4] Cylinder or Carol's, and an appropriate justification is given, and 14.9, and appropriate work is shown.
 - [3] Appropriate work is shown, but one computational or rounding error is made, but an appropriate container, justification, and difference are given.

or

[3] Appropriate work is shown to find both volumes and 14.9, but no container is selected.

or

- [3] Appropriate work is shown, cylinder is stated, and an appropriate justification is given, but no further correct work is shown.
- [2] Appropriate work is shown, but two or more computational or rounding errors are made, but an appropriate container, justification, and difference are given.

or

[2] Appropriate work is shown, but one conceptual error is made, but an appropriate container, justification, and difference are given.

or

- [2] Appropriate work is shown to find both volumes, but no further correct work is shown.
- [1] Appropriate work is shown, but one conceptual error and one computational or rounding error are made, but an appropriate container, justification, and difference are given.

or

[1] Appropriate work is shown to find the correct volume for either the rectangular prism or the cylinder, but no further correct work is shown.

or

- [1] Cylinder and 14.9, but no work is shown.
- [0] Cylinder, 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.

- (38) [4] 4, and appropriate algebraic work is shown.
 - [3] Appropriate work is shown, but one computational error is made, but an appropriate solution is stated.
 - [2] Appropriate work is shown, but two or more computational errors are made, but an appropriate solution is stated.

or

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

or

[2] Appropriate work is shown to find -2x + 3 = 19 - 6x, but no further correct work is shown.

or

- [2] 4, but a method other than algebraic is used.
- [1] Appropriate work is shown, but one conceptual error and one computational error are made, but an appropriate solution is stated.

or

[1] 3x + 3 - 5x = 12 - 6x + 7 is written, but no further correct work is shown.

- [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] 358,800 and 1,000,000, and six-digit or numeric password, and appropriate work is shown, and an appropriate explanation is written.
 - [3] Appropriate work is shown, but one computational error is made, but appropriate solutions are stated, and an appropriate choice and explanation are written.

or

[3] Appropriate work is shown to find 358,800 and 1,000,000, and six-digit password, but an explanation is missing or is incorrect.

or

- [3] Appropriate work is shown to find 1,000,000 and six-digit password, and an appropriate explanation is written, but no further correct work is shown.
- [2] Appropriate work is shown, but two or more computational errors are made, but appropriate solutions are stated, and an appropriate choice and explanation are written.

or

[2] Appropriate work is shown, but one conceptual error is made, but appropriate solutions are stated, and an appropriate choice and explanation are written.

or

[2] Appropriate work is shown to find 358,800 and 1,000,000, but no further correct work is shown.

or

[2] Appropriate work is shown to find 1,000,000 and six-digit password, but no further correct work is shown.

or

- [2] 358,800 and 1,000,000, and six-digit password, but no work is shown, but an appropriate explanation is written.
- [1] Appropriate work is shown, but one conceptual error and one computational error are made, but appropriate solutions are stated, and an appropriate choice and explanation are written.

or

[1] Appropriate work is shown to find 358,800 or 1,000,000, but no further correct work is shown.

- [1] 358,800 and 1,000,000, and six-digit password, but no work is shown, and no explanation is written.
- [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	36, 39
Algebra	3, 4, 8, 10, 11, 13, 14, 15, 16, 17, 19, 20, 22, 23, 24, 25, 26, 27, 29, 31, 35, 38
Geometry	9, 12, 21, 34, 37
Measurement	1, 28, 33
Statistics and Probability	2, 5, 6, 7, 18, 30, 32

Regents Examination in Integrated Algebra **June 2012**

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

The Chart for Determining the Final Examination Score for the June 2012 Regents Examination in Integrated Algebra will be posted on the Department's web site at: http://www.p12.nysed.gov/apda/ on Thursday, June 14, 2012. Conversion charts provided for previous administrations of the Regents Examination in Integrated Algebra must NOT be used to determine students' final scores for this administration.

Online Submission of Teacher Evaluations of the Test to the Department

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

- 1. Go to http://www.forms2.nysed.gov/emsc/osa/exameval/reexameval.cfm.
- 2. Select the test title.
- 3. Complete the required demographic fields.
- 4. Complete each evaluation question and provide comments in the space provided.
- 5. Click the SUBMIT button at the bottom of the page to submit the completed form.

Regents Examination in Integrated Algebra – June 2012

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

Raw	Scale
Score	Score
87	100
86	99
85	97
84	96
83	95
82	94
81	93
80	92
79	91
78	90
77	90
76	89
75	88
74	88
73	87
72	86
71	86
70	86
69	86
68	85
67	84
66	84

Raw	Scale
Score	Score
65	83
64	83
63	83
62	82
61	82
60	82
59	81
58	81
57	81
56	80
55	80
54	80
53	79
52	79
51	79
50	78
49	78
48	77
47	77
46	76
45	76
44	75

Raw	Scale
Score	Score
43	75
42	74
41	74
40	73
39	72
38	72
37	71
36	70
35	69
34	68
33	68
32	67
31	66
30	65
29	64
28	63
27	61
26	60
25	59
24	58
23	56
22	55

Score
53
52
50
48
47
45
43
41
39
36
34
32
29
27
24
21
18
15
11
8
4
0

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

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

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