

INTEGRATED ALGEBRA

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

INTEGRATED ALGEBRA

Friday, June 18, 2010—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. Then turn to the last page of this booklet, which is the answer sheet for Part I. Fold the last page along the perforations and, slowly and carefully, tear off the answer sheet. Then fill in the heading of your answer sheet.

This examination has four parts, with a total of 39 questions. You must answer all questions in this examination. Write 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]

Use this space for
computations.

1 Given:

$$\text{Set } U = \{S, O, P, H, I, A\}$$

$$\text{Set } B = \{A, I, O\}$$

If set B is a subset of set U , what is the complement of set B ?

(1) $\{O, P, S\}$

(3) $\{A, H, P\}$

(2) $\{I, P, S\}$

(4) $\{H, P, S\}$

2 How many different sandwiches consisting of one type of cheese, one condiment, and one bread choice can be prepared from five types of cheese, two condiments, and three bread choices?

(1) 10

(3) 15

(2) 13

(4) 30

3 The sum of $4x^3 + 6x^2 + 2x - 3$ and $3x^3 + 3x^2 - 5x - 5$ is

(1) $7x^3 + 3x^2 - 3x - 8$

(3) $7x^3 + 9x^2 - 3x - 8$

(2) $7x^3 + 3x^2 + 7x + 2$

(4) $7x^6 + 9x^4 - 3x^2 - 8$

Use this space for
computations.

4 What is the slope of the line that passes through the points $(3,5)$ and $(-2,2)$?

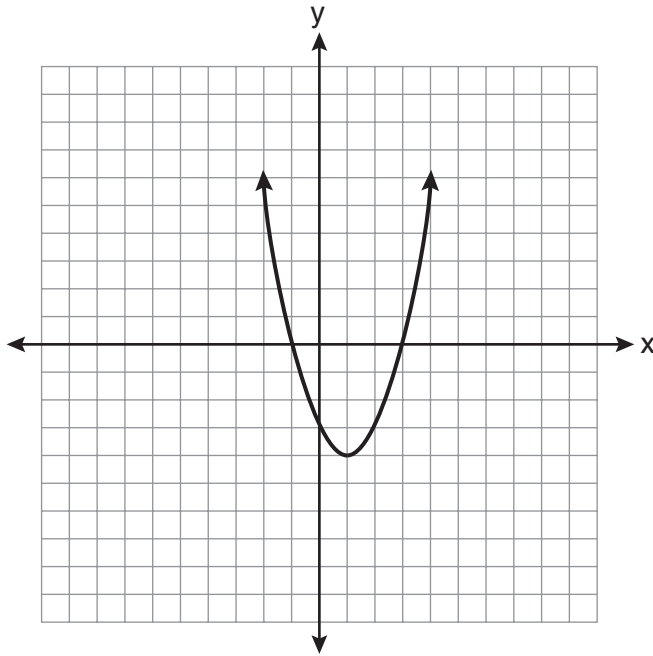
(1) $\frac{1}{5}$

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

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

(4) 5

5 What are the vertex and axis of symmetry of the parabola shown in the diagram below?



(1) vertex: $(1, -4)$; axis of symmetry: $x = 1$

(2) vertex: $(1, -4)$; axis of symmetry: $x = -4$

(3) vertex: $(-4, 1)$; axis of symmetry: $x = 1$

(4) vertex: $(-4, 1)$; axis of symmetry: $x = -4$

Use this space for computations.

9 In $\triangle ABC$, the measure of $\angle B = 90^\circ$, $AC = 50$, $AB = 48$, and $BC = 14$. Which ratio represents the tangent of $\angle A$?

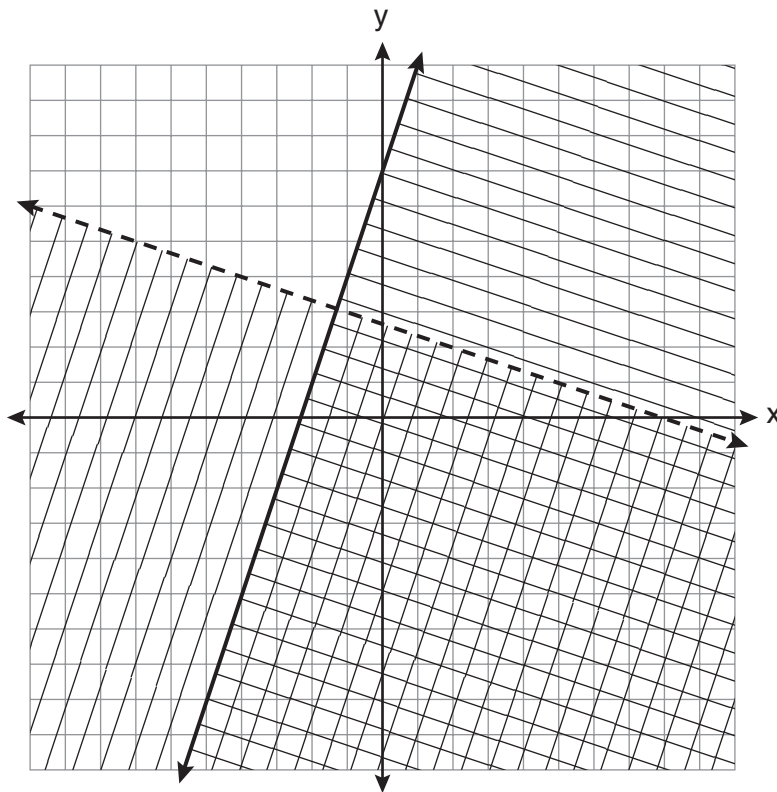
(1) $\frac{14}{50}$

(3) $\frac{48}{50}$

(2) $\frac{14}{48}$

(4) $\frac{48}{14}$

10 Which ordered pair is in the solution set of the system of linear inequalities graphed below?



(1) $(1, -4)$

(3) $(5, 3)$

(2) $(-5, 7)$

(4) $(-7, -2)$

Use this space for computations.

11 Which table does *not* show bivariate data?

(1)

Height (inches)	Weight (pounds)
39	50
48	70
60	90

(2)

Gallons	Miles Driven
15	300
20	400
25	500

(3)

Quiz Average	Frequency
70	12
80	15
90	6

(4)

Speed (mph)	Distance (miles)
40	80
50	120
55	150

12 What is the solution of the system of equations $c + 3d = 8$ and $c = 4d - 6$?

(1) $c = -14, d = -2$

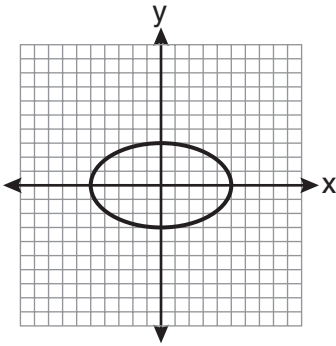
(3) $c = 2, d = 2$

(2) $c = -2, d = 2$

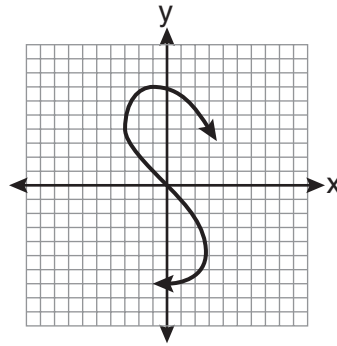
(4) $c = 14, d = -2$

Use this space for computations.

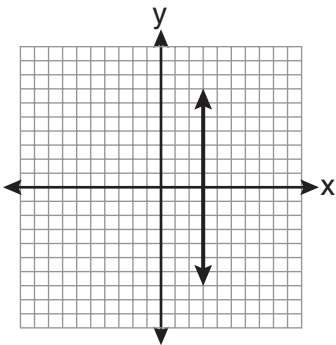
13 Which graph represents a function?



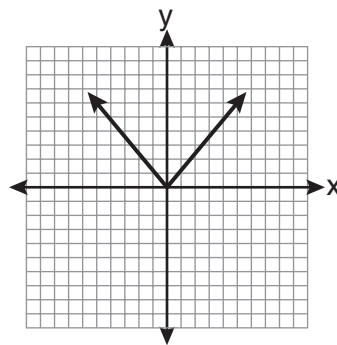
(1)



(3)



(2)



(4)

14 The algebraic expression $\frac{x-2}{x^2-9}$ is undefined when x is

(1) 0

(3) 3

(2) 2

(4) 9

Use this space for computations.

15 The graphs of the equations $y = 2x - 7$ and $y - kx = 7$ are parallel when k equals

- (1) -2
- (2) 2
- (3) -7
- (4) 7

16 Which verbal expression is represented by $\frac{1}{2}(n - 3)$?

- (1) one-half n decreased by 3
- (2) one-half n subtracted from 3
- (3) the difference of one-half n and 3
- (4) one-half the difference of n and 3

17 The freshman class held a canned food drive for 12 weeks. The results are summarized in the table below.

Canned Food Drive Results

Week	1	2	3	4	5	6	7	8	9	10	11	12
Number of Cans	20	35	32	45	58	46	28	23	31	79	65	62

Which number represents the second quartile of the number of cans of food collected?

- (1) 29.5
- (2) 30.5
- (3) 40
- (4) 60

Use this space for
computations.

18 Which expression represents $\frac{-14a^2c^8}{7a^3c^2}$ in simplest form?

(1) $-2ac^4$

(3) $\frac{-2c^4}{a}$

(2) $-2ac^6$

(4) $\frac{-2c^6}{a}$

19 Which value of x is the solution of $\frac{x}{3} + \frac{x+1}{2} = x$?

(1) 1

(3) 3

(2) -1

(4) -3

20 When 36 is subtracted from the square of a number, the result is five times the number. What is the positive solution?

(1) 9

(3) 3

(2) 6

(4) 4

21 Which interval notation represents the set of all numbers greater than or equal to 5 and less than 12?

(1) $[5, 12)$

(3) $(5, 12)$

(2) $(5, 12]$

(4) $[5, 12]$

Use this space for computations.

- 22 Four hundred licensed drivers participated in the math club's survey on driving habits. The table below shows the number of drivers surveyed in each age group.

Ages of People in Survey on Driving Habits

Age Group	Number of Drivers
16–25	150
26–35	129
36–45	33
46–55	57
56–65	31

Which statement best describes a conclusion based on the data in the table?

- (1) It may be biased because no one younger than 16 was surveyed.
 - (2) It would be fair because many different age groups were surveyed.
 - (3) It would be fair because the survey was conducted by the math club students.
 - (4) It may be biased because the majority of drivers surveyed were in the younger age intervals.
- 23 A formula used for calculating velocity is $v = \frac{1}{2}at^2$. What is a expressed in terms of v and t ?

- (1) $a = \frac{2v}{t}$
- (2) $a = \frac{2v}{t^2}$
- (3) $a = \frac{v}{t}$
- (4) $a = \frac{v}{2t^2}$

Use this space for
computations.

24 What is the sum of $\frac{-x + 7}{2x + 4}$ and $\frac{2x + 5}{2x + 4}$?

(1) $\frac{x + 12}{2x + 4}$

(3) $\frac{x + 12}{4x + 8}$

(2) $\frac{3x + 12}{2x + 4}$

(4) $\frac{3x + 12}{4x + 8}$

25 Steve ran a distance of 150 meters in $1\frac{1}{2}$ minutes. What is his speed in meters per hour?

(1) 6

(3) 100

(2) 60

(4) 6,000

26 How many different three-letter arrangements can be formed using the letters in the word *ABSOLUTE* if each letter is used only once?

(1) 56

(3) 168

(2) 112

(4) 336

27 Factored completely, the expression $3x^2 - 3x - 18$ is equivalent to

(1) $3(x^2 - x - 6)$

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

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

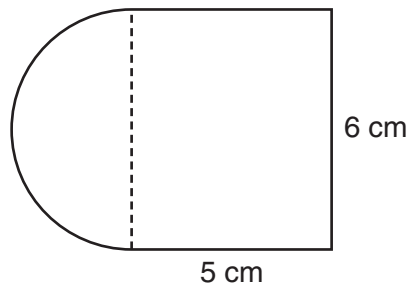
(4) $(3x + 6)(x - 3)$

Use this space for
computations.

28 Which quadrant will be completely shaded in the graph of the inequality $y \leq 2x$?

- (1) Quadrant I (3) Quadrant III
(2) Quadrant II (4) Quadrant IV

29 A figure is made up of a rectangle and a semicircle as shown in the diagram below.



What is the area of the figure, to the *nearest tenth of a square centimeter*?

- (1) 39.4 (3) 48.8
(2) 44.1 (4) 58.3

30 The value, y , of a \$15,000 investment over x years is represented by the equation $y = 15000(1.2)^{\frac{x}{3}}$. What is the profit (interest) on a 6-year investment?

- (1) \$6,600 (3) \$21,600
(2) \$10,799 (4) \$25,799
-

Part II

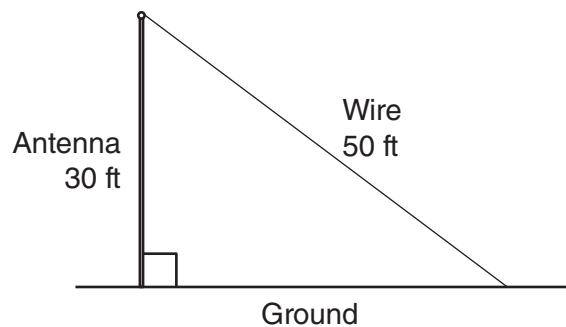
Answer all 3 questions in this part. Each correct answer will receive 2 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit.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

- 31 Alexis calculates the surface area of a gift box as 600 square inches. The actual surface area of the gift box is 592 square inches. Find the relative error of Alexis' calculation expressed as a decimal to the *nearest thousandth*.

32 Perform the indicated operation: $-6(a - 7)$

State the name of the property used.

- 33** A communications company is building a 30-foot antenna to carry cell phone transmissions. As shown in the diagram below, a 50-foot wire from the top of the antenna to the ground is used to stabilize the antenna.



Find, to the *nearest degree*, the measure of the angle that the wire makes with the ground.

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: $A = \{18, 6, -3, -12\}$

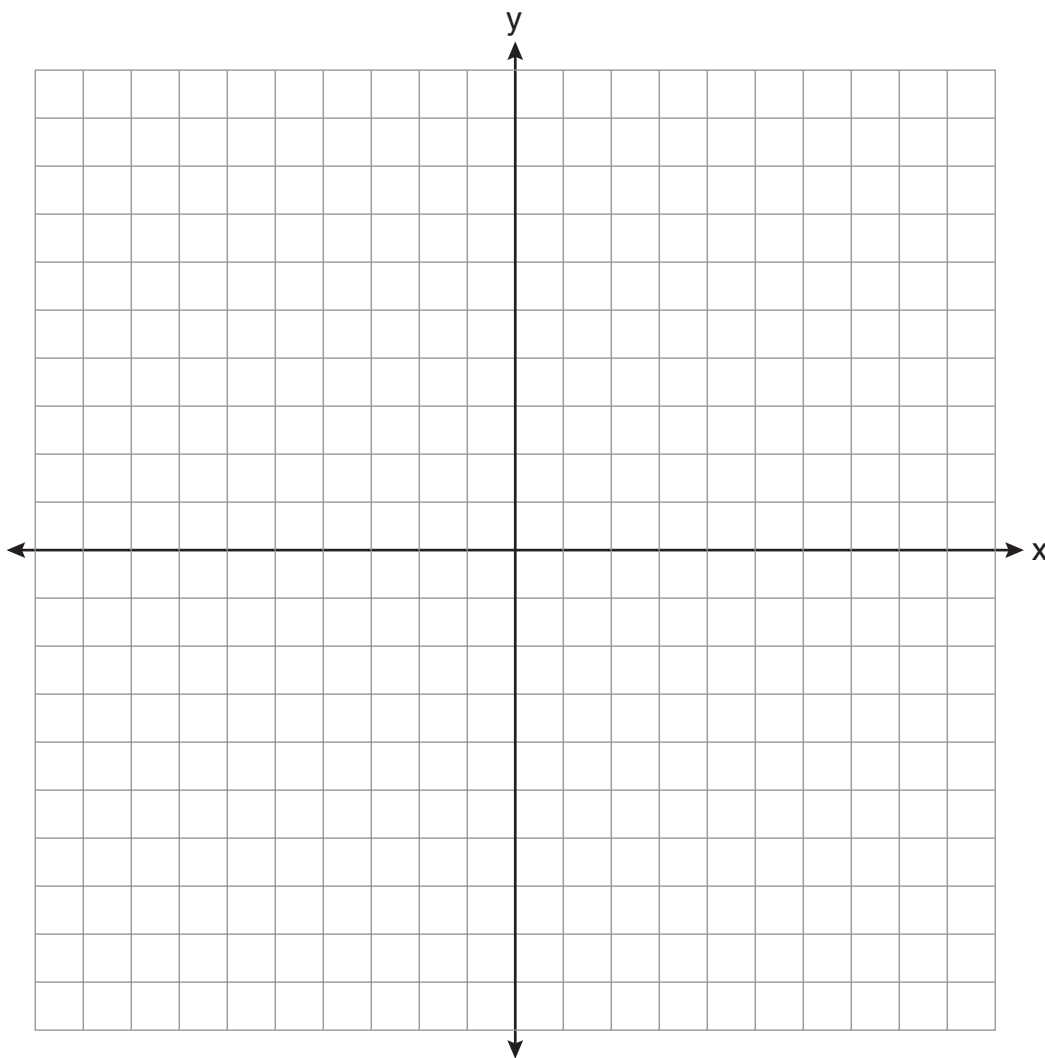
Determine all elements of set A that are in the solution of the inequality $\frac{2}{3}x + 3 < -2x - 7$.

35 Graph and label the following equations on the set of axes below.

$$y = |x|$$

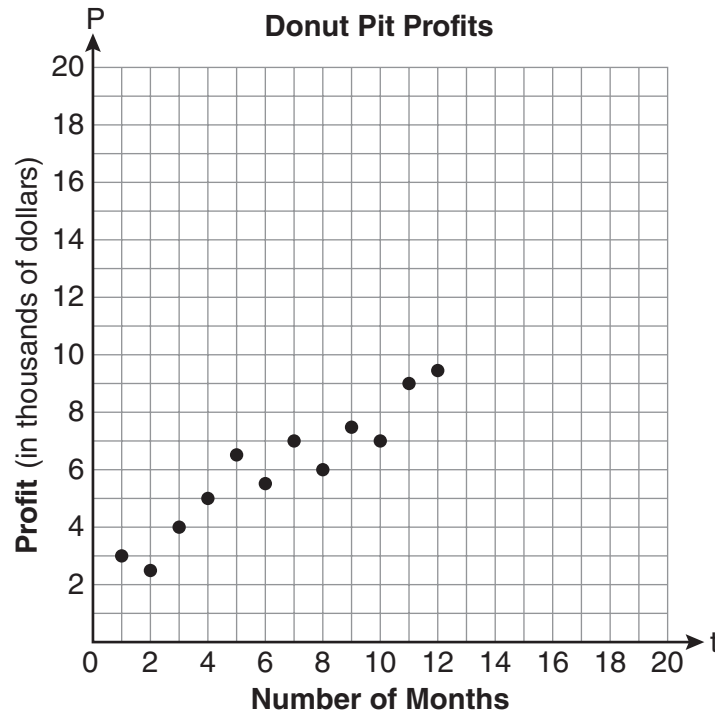
$$y = \left|\frac{1}{2}x\right|$$

Explain how *decreasing* the coefficient of x affects the graph of the equation $y = |x|$.



36 Megan and Bryce opened a new store called the Donut Pit. Their goal is to reach a profit of \$20,000 in their 18th month of business. The table and scatter plot below represent the profit, P , in thousands of dollars, that they made during the first 12 months.

t (months)	1	2	3	4	5	6	7	8	9	10	11	12
P (profit, in thousands of dollars)	3.0	2.5	4.0	5.0	6.5	5.5	7.0	6.0	7.5	7.0	9.0	9.5



Draw a reasonable line of best fit.

Using the line of best fit, predict whether Megan and Bryce will reach their goal in the 18th month of their business.

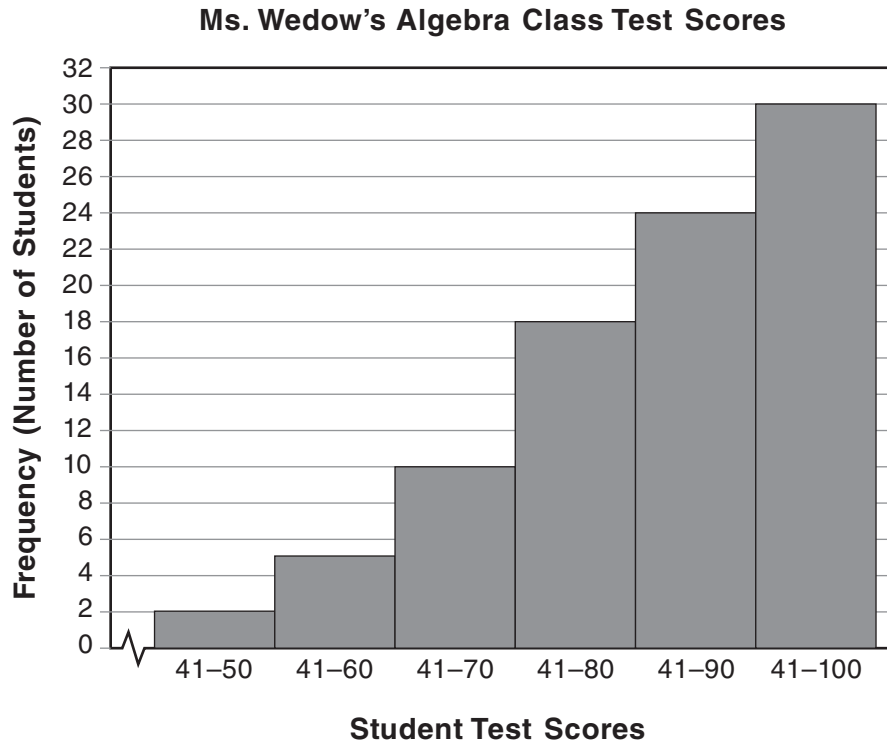
Justify your answer.

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 Express in simplest form: $\frac{x^2 + 9x + 14}{x^2 - 49} \div \frac{3x + 6}{x^2 + x - 56}$

38 The diagram below shows a cumulative frequency histogram of the students' test scores in Ms. Wedow's algebra class.



Determine the total number of students in the class.

Determine how many students scored higher than 70.

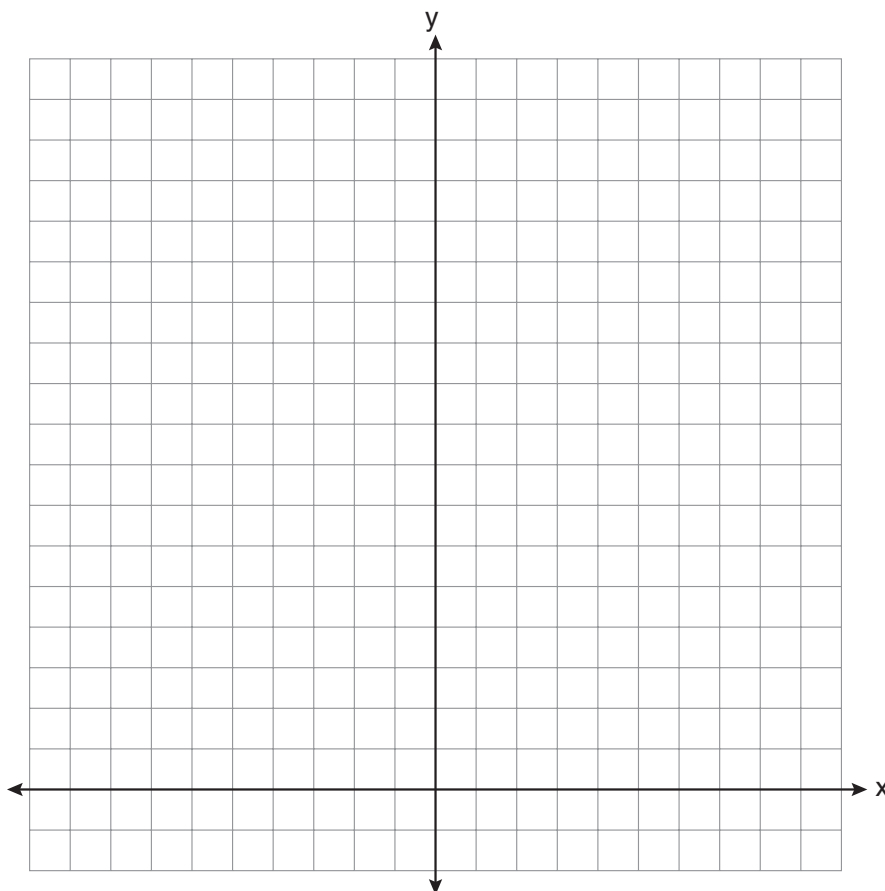
State which *ten-point* interval contains the median.

State which *two ten-point* intervals contain the same frequency.

39 On the set of axes below, solve the following system of equations graphically for all values of x and y .

$$y = -x^2 - 4x + 12$$

$$y = -2x + 4$$



Reference Sheet

Trigonometric Ratios

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

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

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

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 $SA = 2\pi r^2 + 2\pi rh$

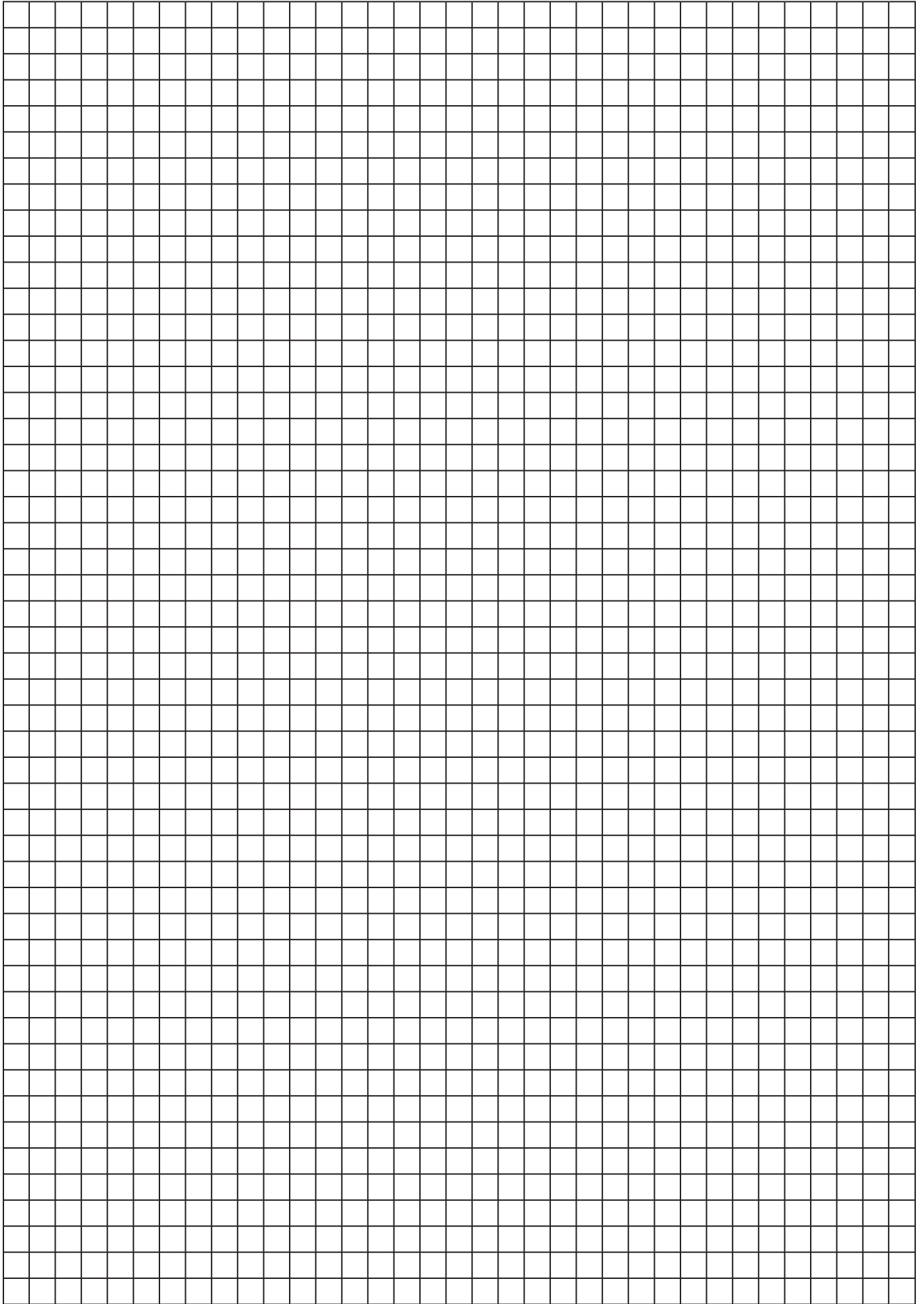
Coordinate Geometry

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

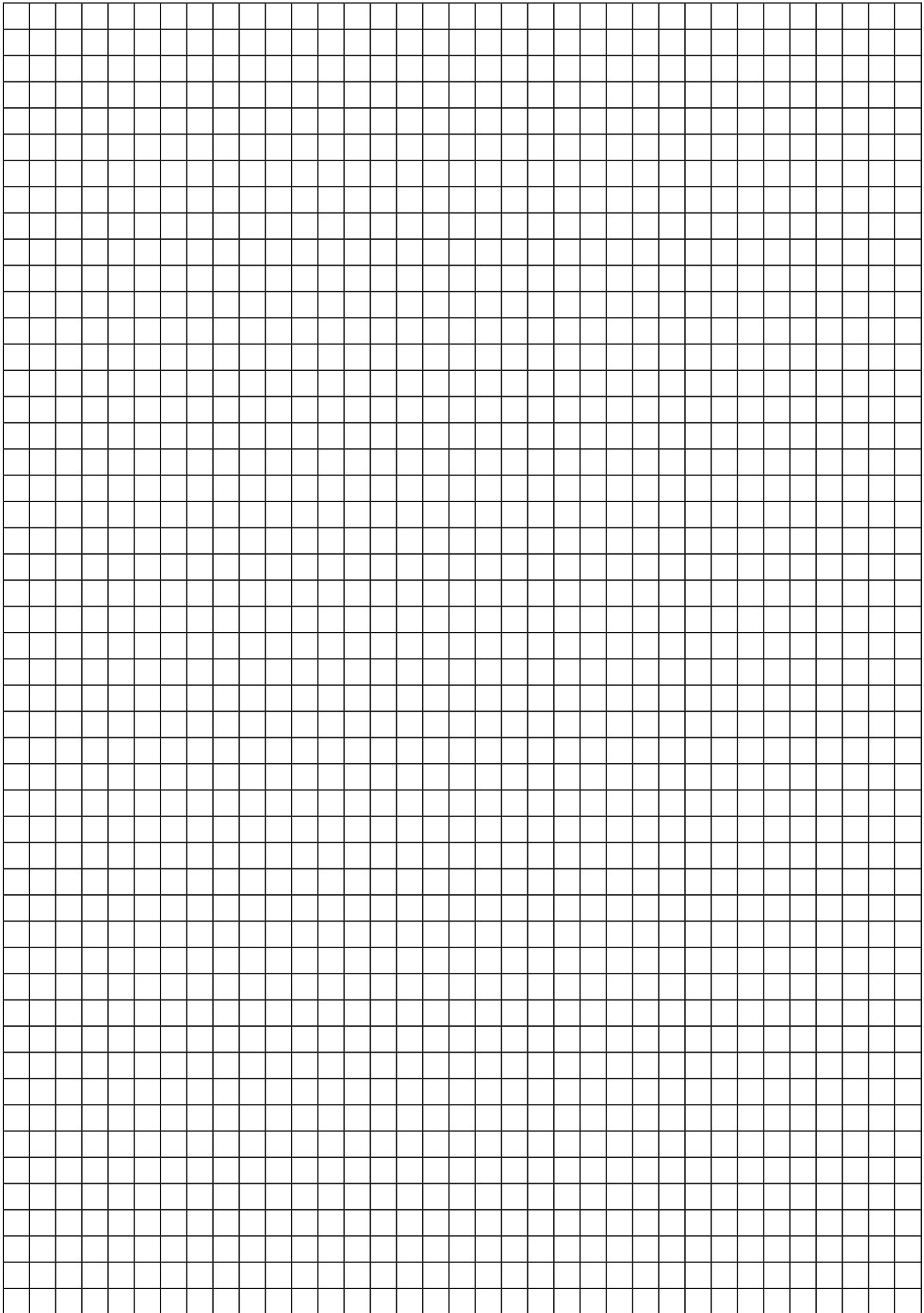
Scrap Graph Paper — This sheet will *not* be scored.

Tear Here

Tear Here



Scrap Graph Paper — This sheet will *not* be scored.



Tear Here

Tear Here

Tear Here

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

INTEGRATED ALGEBRA

Friday, June 18, 2010—1:15 to 4:15 p.m., only

ANSWER SHEET

Student Sex: Male Female Grade

Teacher School

Your answers to Part I should be recorded on this answer sheet.

Part I

Answer all 30 questions in this part.

- 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

Your answers for Parts II, III, and IV should be written in the test booklet.

The declaration below must be signed when you have completed the examination.

I do hereby affirm, at the close of this examination, that I had no unlawful knowledge of the questions or answers prior to the examination and that I have neither given nor received assistance in answering any of the questions during the examination.

Signature

Tear Here

INTEGRATED ALGEBRA

INTEGRATED ALGEBRA			
Question	Maximum Credit	Credits Earned	Rater's/Scorer's Initials
Part I 1–30	60		
Part II 31	2		
32	2		
33	2		
Part III 34	3		
35	3		
36	3		
Part IV 37	4		
38	4		
39	4		
Maximum Total	87		

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

Total Raw Score

Checked by

--

Scale Score
(from conversion chart)

Tear Here

Tear Here

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

INTEGRATED ALGEBRA

Friday, June 18, 2010 – 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 Integrated Algebra and Geometry*.

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 scale score by using the conversion chart that will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Friday, June 18, 2010. The student's scale score should be entered in the box provided on the student's detachable 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) 4	(9) 2	(17) 3	(25) 4
(2) 4	(10) 1	(18) 4	(26) 4
(3) 3	(11) 3	(19) 3	(27) 2
(4) 2	(12) 3	(20) 1	(28) 4
(5) 1	(13) 4	(21) 1	(29) 2
(6) 3	(14) 3	(22) 4	(30) 1
(7) 3	(15) 2	(23) 2	
(8) 3	(16) 4	(24) 1	

Updated information regarding the rating of this examination may be posted on the New York State Education Department’s web site during the rating period. Check this web site <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 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 Integrated Algebra and Geometry*, 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] 0.014, and appropriate work is shown.

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

or

[1] Appropriate work is shown, but one conceptual error is made, such as dividing by 600.

or

[1] Appropriate work is shown, but the answer is expressed as a percent.

or

[1] 0.014, 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] $-6a + 42$, and the distributive property is stated.

[1] $-6a + 42$, but the property is not stated.

or

[1] The distributive property is stated, but the operation is not performed.

[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] 37, and appropriate work is shown.

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

or

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

or

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

or

[1] 37, 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.

(34) [3] -12 , and appropriate work is shown, such as solving the inequality or substituting each value into the inequality and indicating its truth value.

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

or

[2] The inequality is solved correctly for x , but the required solution is not stated or is stated incorrectly.

[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] -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.

INTEGRATED ALGEBRA – *continued*

- (35) [3] Both equations are graphed correctly and at least one of the graphs is labeled, and an appropriate explanation is given, such as the graph becomes wider.
- [2] Both equations are graphed correctly and at least one of the graphs is labeled, but no explanation or an incorrect explanation is given.
- or*
- [2] One equation is graphed and labeled correctly, and an appropriate explanation is given.
- [1] Appropriate work is shown, but one conceptual error is made.
- or*
- [1] One equation is graphed and labeled correctly, but no further correct work is shown.
- or*
- [1] An appropriate explanation is given, but no graphs are drawn.
- [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously incorrect procedure.

INTEGRATED ALGEBRA – *continued*

(36) [3] An appropriate line of best fit is drawn, and “No,” and an appropriate justification is written.

[2] An appropriate line of best fit is drawn, and “No,” but no justification or an incorrect justification is written.

or

[2] The line of best fit is not drawn or is drawn incorrectly, but an appropriate prediction is stated, and an appropriate justification is written.

[1] An appropriate line of best fit is drawn, but no further correct work is shown.

[0] “No,” 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.

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.

(37) [4] $\frac{x+8}{3}$, and appropriate work is shown.

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

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

or

[2] Appropriate work is shown, but one conceptual error is made, such as not multiplying by the reciprocal.

or

[2] The expression is correctly written as a product and all numerators and denominators are factored correctly, but no further correct work is shown.

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

or

[1] All numerators and denominators are factored correctly, but no further correct work is shown.

or

[1] $\frac{x+8}{3}$, 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.

- (38) [4] 30 students total are in the class, 20 students scored higher than 70, 71–80 is the interval containing the median, and 81–90 and 91–100 are the intervals containing the same frequency.
- [3] Three of the four solutions are correct.
- [2] Two of the four solutions are correct.
- [1] One of the four solutions is correct.
- [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 equations are graphed correctly, and $(2,0)$ and $(-4,12)$ are stated.

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

or

[3] Both equations are graphed correctly, but only one correct point of intersection is stated.

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

or

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

or

[2] Both equations are graphed correctly, but the points of the intersection are not stated or are stated incorrectly.

or

[2] $(2,0)$ and $(-4,12)$, but a method other than graphic is used.

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

or

[1] One of the equations is graphed correctly, but no further correct work is shown.

or

[1] $(2,0)$ and $(-4,12)$ are stated, but no work is shown.

[0] $(2,0)$ or $(-4,12)$ are stated, but no work is shown.

or

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

Map to Core Curriculum

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

Regents Examination in Integrated Algebra

June 2010

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

The *Chart for Determining the Final Examination Score for the June 2010 Regents Examination in Integrated Algebra* will be posted on the Department’s web site <http://www.emsc.nysed.gov/osa/> on Friday, June 18, 2010. 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 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 Integrated Algebra June 2010

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

All student answer papers that receive a scale score of 60 through 64 **must** be scored a second time to ensure the accuracy of the score. 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 scale 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 Regents Examination in Integrated Algebra.