

# INTEGRATED ALGEBRA

Wednesday, August 17, 2011—8:30 to 11:30 a.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.**



**Use this space for  
computations.**

**3** If the universal set is {pennies, nickels, dimes, quarters}, what is the complement of the set {nickels}?

- (1) { }
- (2) {pennies, quarters}
- (3) {pennies, dimes, quarters}
- (4) {pennies, nickels, dimes, quarters}

**4** Which situation does *not* describe a causal relationship?

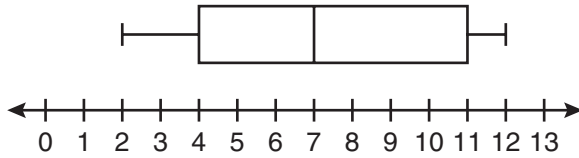
- (1) The higher the volume on a radio, the louder the sound will be.
- (2) The faster a student types a research paper, the more pages the paper will have.
- (3) The shorter the distance driven, the less gasoline that will be used.
- (4) The slower the pace of a runner, the longer it will take the runner to finish the race.

**5** A cylinder has a diameter of 10 inches and a height of 2.3 inches. What is the volume of this cylinder, to the *nearest tenth of a cubic inch*?

- (1) 72.3
- (2) 83.1
- (3) 180.6
- (4) 722.6

Use this space for  
computations.

6 Based on the box-and-whisker plot below, which statement is *false*?



- (1) The median is 7.
  - (2) The range is 12.
  - (3) The first quartile is 4.
  - (4) The third quartile is 11.
- 7 The ninth grade class at a local high school needs to purchase a park permit for \$250.00 for their upcoming class picnic. Each ninth grader attending the picnic pays \$0.75. Each guest pays \$1.25. If 200 ninth graders attend the picnic, which inequality can be used to determine the number of guests,  $x$ , needed to cover the cost of the permit?
- (1)  $0.75x - (1.25)(200) \geq 250.00$
  - (2)  $0.75x + (1.25)(200) \geq 250.00$
  - (3)  $(0.75)(200) - 1.25x \geq 250.00$
  - (4)  $(0.75)(200) + 1.25x \geq 250.00$
- 8 Which equation represents the line that passes through the point (1,5) and has a slope of  $-2$ ?
- (1)  $y = -2x + 7$
  - (2)  $y = -2x + 11$
  - (3)  $y = 2x - 9$
  - (4)  $y = 2x + 3$
- 9 What is the solution of the system of equations  $2x - 5y = 11$  and  $-2x + 3y = -9$ ?
- (1)  $(-3, -1)$
  - (2)  $(-1, 3)$
  - (3)  $(3, -1)$
  - (4)  $(3, 1)$

Use this space for computations.

10 Which algebraic expression represents 15 less than  $x$  divided by 9?

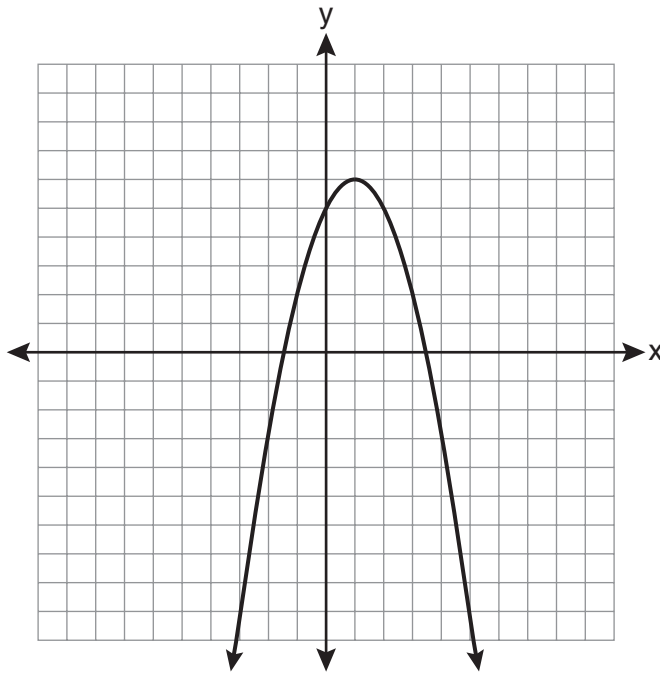
(1)  $\frac{x}{9} - 15$

(3)  $15 - \frac{x}{9}$

(2)  $9x - 15$

(4)  $15 - 9x$

11 What are the vertex and the axis of symmetry of the parabola shown in the graph below?



(1) vertex: (1,6); axis of symmetry:  $y = 1$

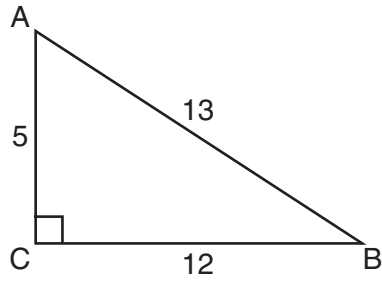
(2) vertex: (1,6); axis of symmetry:  $x = 1$

(3) vertex: (6,1); axis of symmetry:  $y = 1$

(4) vertex: (6,1); axis of symmetry:  $x = 1$

Use this space for  
computations.

12 The diagram below shows right triangle  $ABC$ .



Which ratio represents the tangent of  $\angle ABC$ ?

(1)  $\frac{5}{13}$

(3)  $\frac{12}{13}$

(2)  $\frac{5}{12}$

(4)  $\frac{12}{5}$

13 What is the value of the expression  $-3x^2y + 4x$  when  $x = -4$  and  $y = 2$ ?

(1)  $-112$

(3)  $80$

(2)  $-80$

(4)  $272$

14 Which expression is equivalent to  $-3x(x - 4) - 2x(x + 3)$ ?

(1)  $-x^2 - 1$

(3)  $-5x^2 - 6x$

(2)  $-x^2 + 18x$

(4)  $-5x^2 + 6x$



**Use this space for  
computations.**

**19** Ben has four more than twice as many CDs as Jake. If they have a total of 31 CDs, how many CDs does Jake have?

- (1) 9
- (2) 13
- (3) 14
- (4) 22

**20** What are the roots of the equation  $x^2 - 5x + 6 = 0$ ?

- (1) 1 and  $-6$
- (2) 2 and 3
- (3)  $-1$  and 6
- (4)  $-2$  and  $-3$

**21** What is the solution of the inequality  $-6x - 17 \geq 8x + 25$ ?

- (1)  $x \geq 3$
- (2)  $x \leq 3$
- (3)  $x \geq -3$
- (4)  $x \leq -3$

**22** Which set of data can be classified as qualitative?

- (1) scores of students in an algebra class
- (2) ages of students in a biology class
- (3) numbers of students in history classes
- (4) eye colors of students in an economics class



**Use this space for  
computations.**

**23** Jack wants to replace the flooring in his rectangular kitchen. He calculates the area of the floor to be 12.8 square meters. The actual area of the floor is 13.5 square meters. What is the relative error in calculating the area of the floor, to the *nearest thousandth*?

- (1) 0.051
- (2) 0.052
- (3) 0.054
- (4) 0.055

**24** The current student population of the Brentwood Student Center is 2,000. The enrollment at the center increases at a rate of 4% each year. To the *nearest whole number*, what will the student population be closest to in 3 years?

- (1) 2,240
- (2) 2,250
- (3) 5,488
- (4) 6,240

**25** Maria has a set of 10 index cards labeled with the digits 0 through 9. She puts them in a bag and selects one at random. The outcome that is most likely to occur is selecting

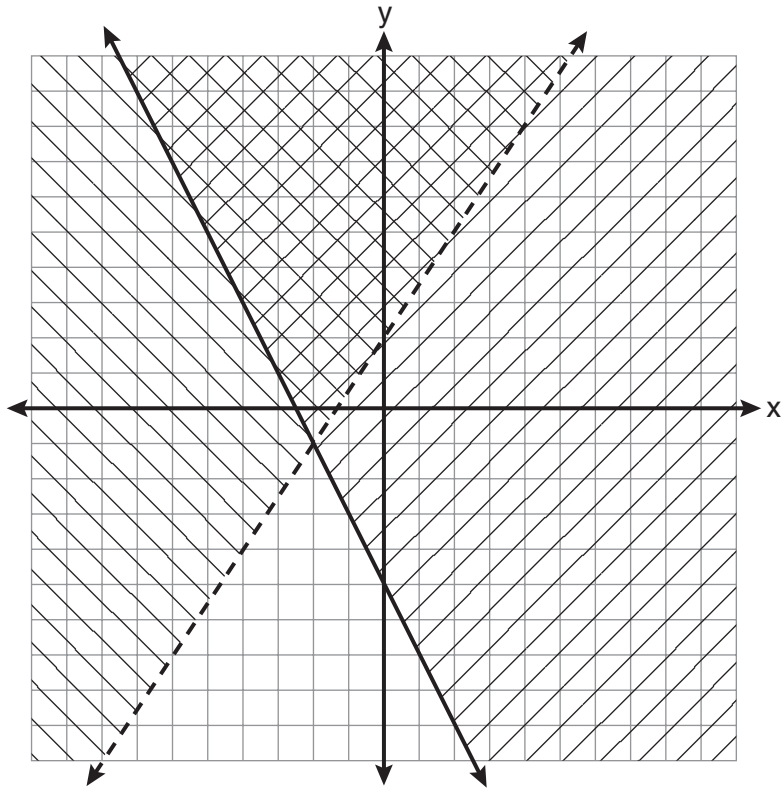
- (1) an odd number
- (2) a prime number
- (3) a number that is at most 5
- (4) a number that is divisible by 3

**26** A right triangle contains a  $38^\circ$  angle whose adjacent side measures 10 centimeters. What is the length of the hypotenuse, to the *nearest hundredth of a centimeter*?

- (1) 7.88
- (2) 12.69
- (3) 12.80
- (4) 16.24

Use this space for computations.

27 Which ordered pair is in the solution set of the system of inequalities shown in the graph below?



(1)  $(-2, -1)$

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

(2)  $(-2, 2)$

(4)  $(2, -2)$



## 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 for  $c$  in terms of  $a$  and  $b$ :  $bc + ac = ab$

32 Ms. Hopkins recorded her students' final exam scores in the frequency table below.

Interval	Tally	Frequency
61-70	###	5
71-80		4
81-90	###	9
91-100	###	6

On the grid below, construct a frequency histogram based on the table.



**33** Mrs. Chen owns two pieces of property. The areas of the properties are 77,120 square feet and 33,500 square feet.

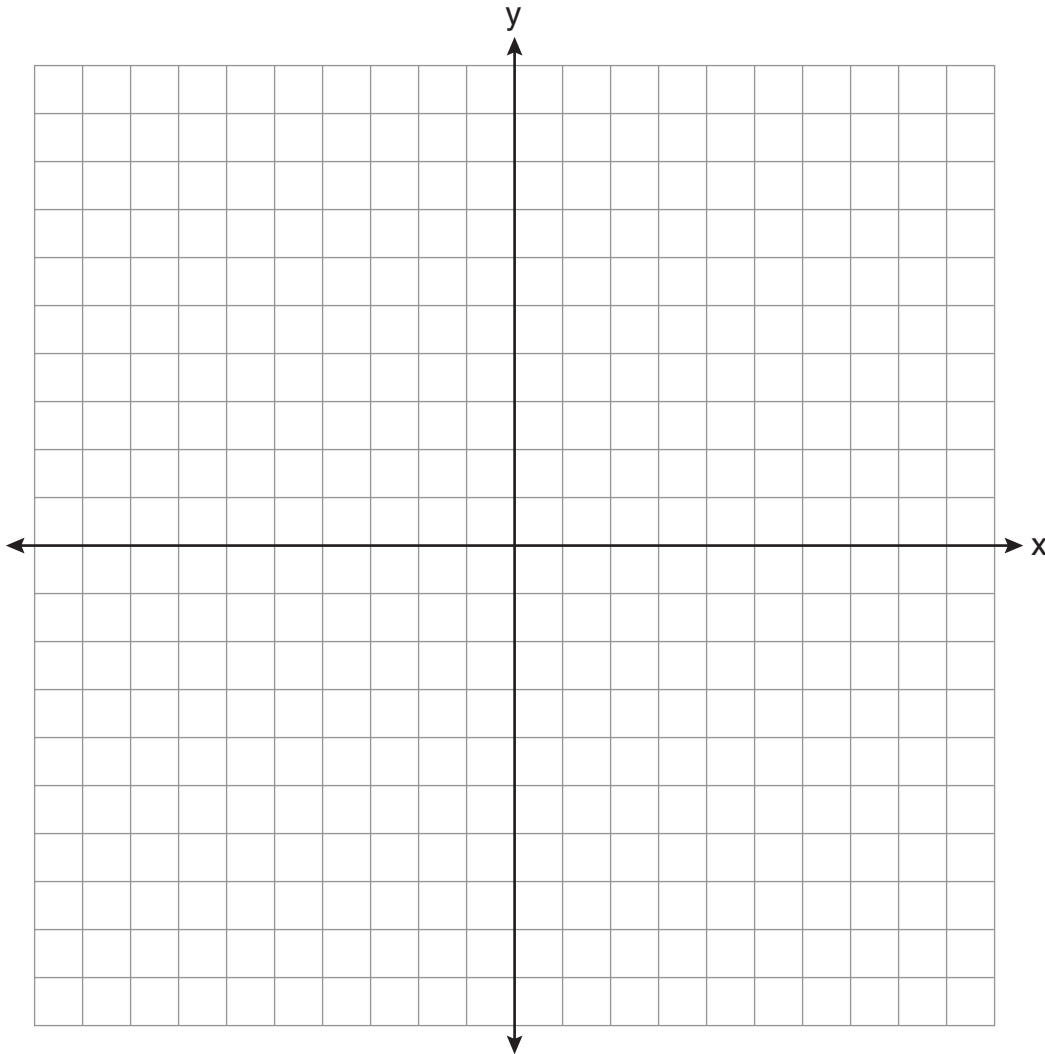
$$43,560 \text{ square feet} = 1 \text{ acre}$$

Find the total number of acres Mrs. Chen owns, to the *nearest hundredth of an acre*.

### Part III

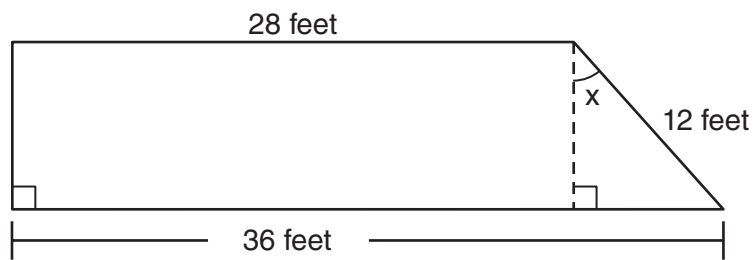
Answer all 3 questions in this part. Each correct answer will receive 3 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [9]

- 34 On the set of axes below, graph and label the equations  $y = |x|$  and  $y = 3|x|$  for the interval  $-3 \leq x \leq 3$ .



Explain how changing the coefficient of the absolute value from 1 to 3 affects the graph.

35 A trapezoid is shown below.



Calculate the measure of angle  $x$ , to the *nearest tenth of a degree*.



**36** Express  $\frac{16\sqrt{21}}{2\sqrt{7}} - 5\sqrt{12}$  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]

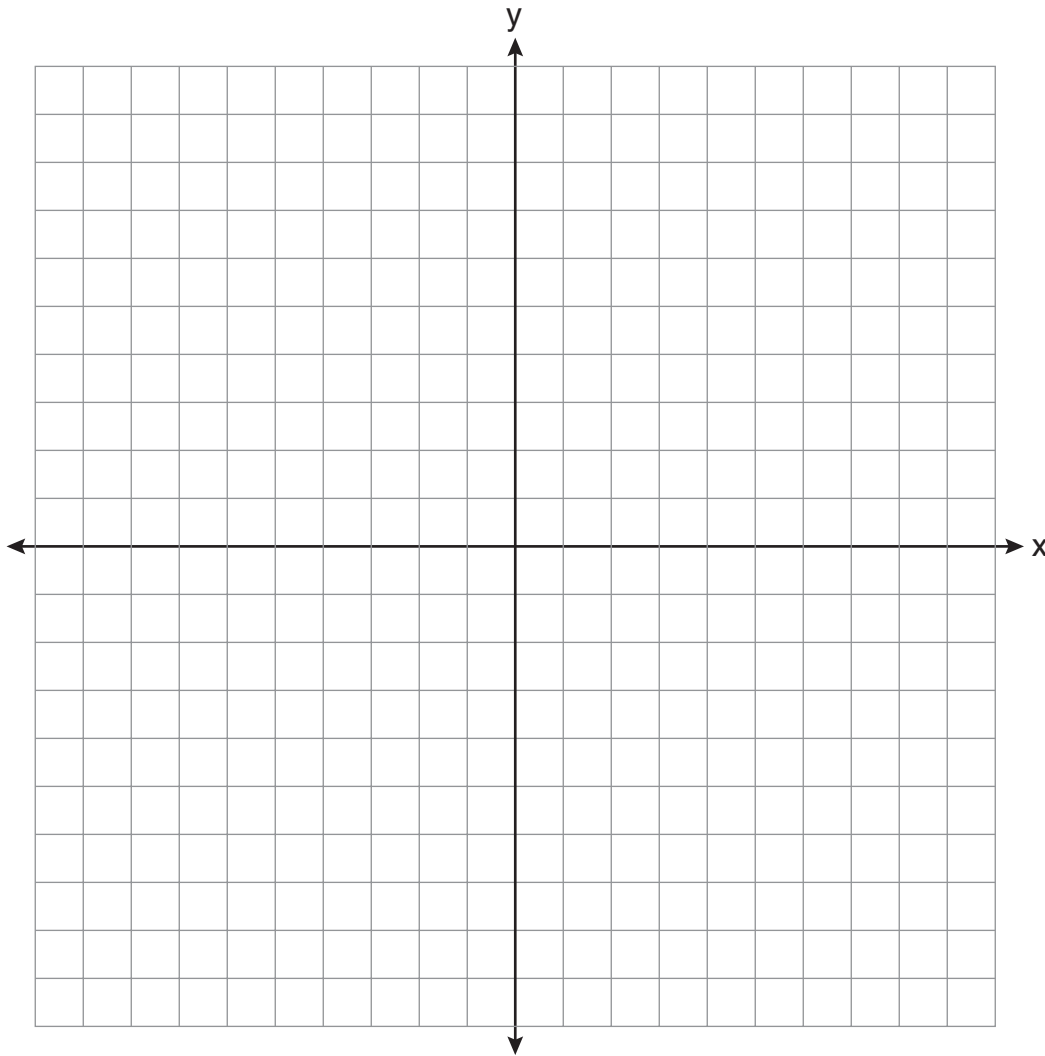
**37** Vince buys a box of candy that consists of six chocolate pieces, four fruit-flavored pieces, and two mint pieces. He selects three pieces of candy at random, without replacement.

Calculate the probability that the first piece selected will be fruit flavored and the other two will be mint.

Calculate the probability that all three pieces selected will be the same type of candy.

38 On the set of axes below, solve the following system of equations graphically and state the coordinates of *all* points in the solution set.

$$y = -x^2 + 6x - 3$$
$$x + y = 7$$

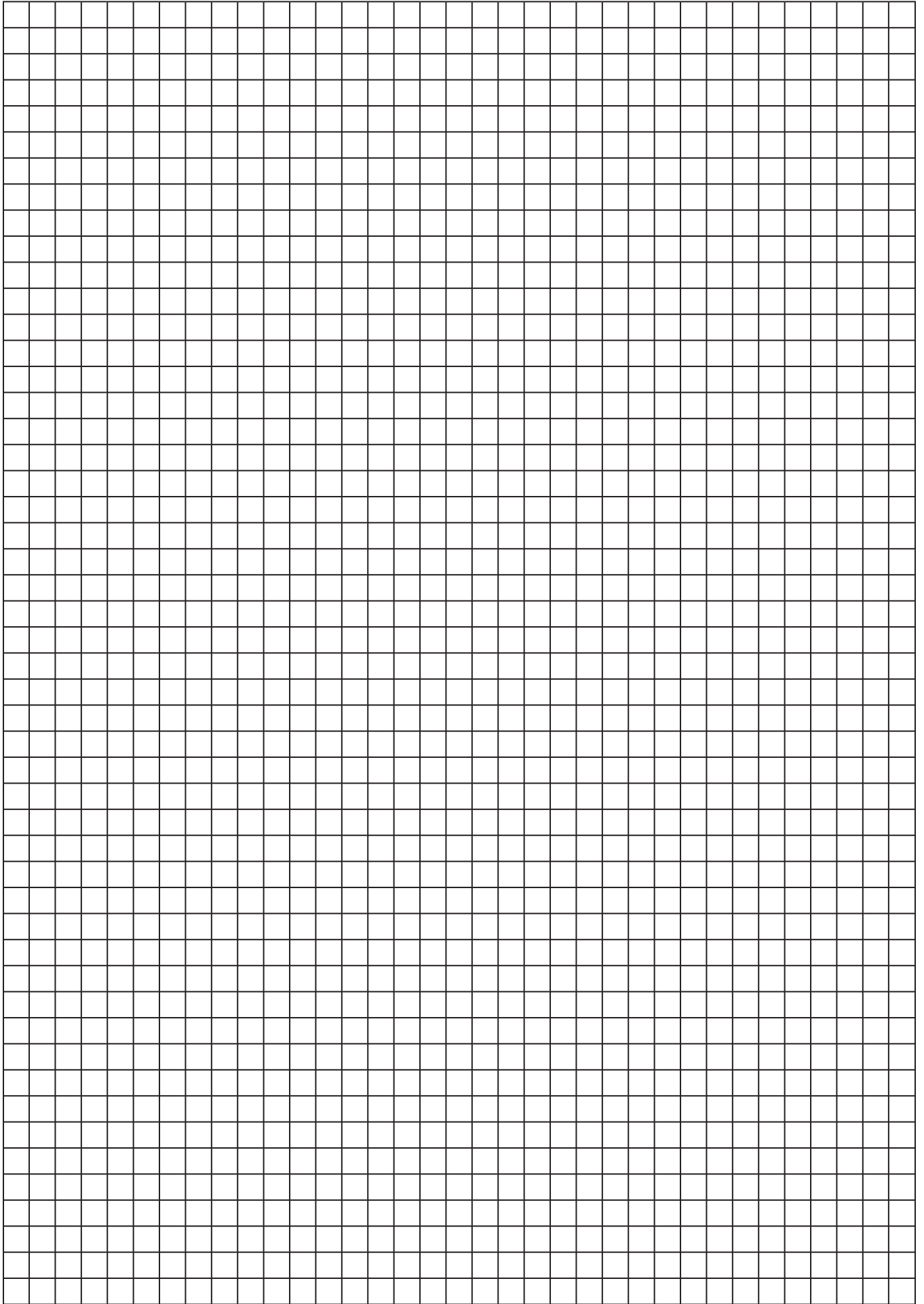


**39** Solve for  $m$ :  $\frac{m}{5} + \frac{3(m-1)}{2} = 2(m-3)$

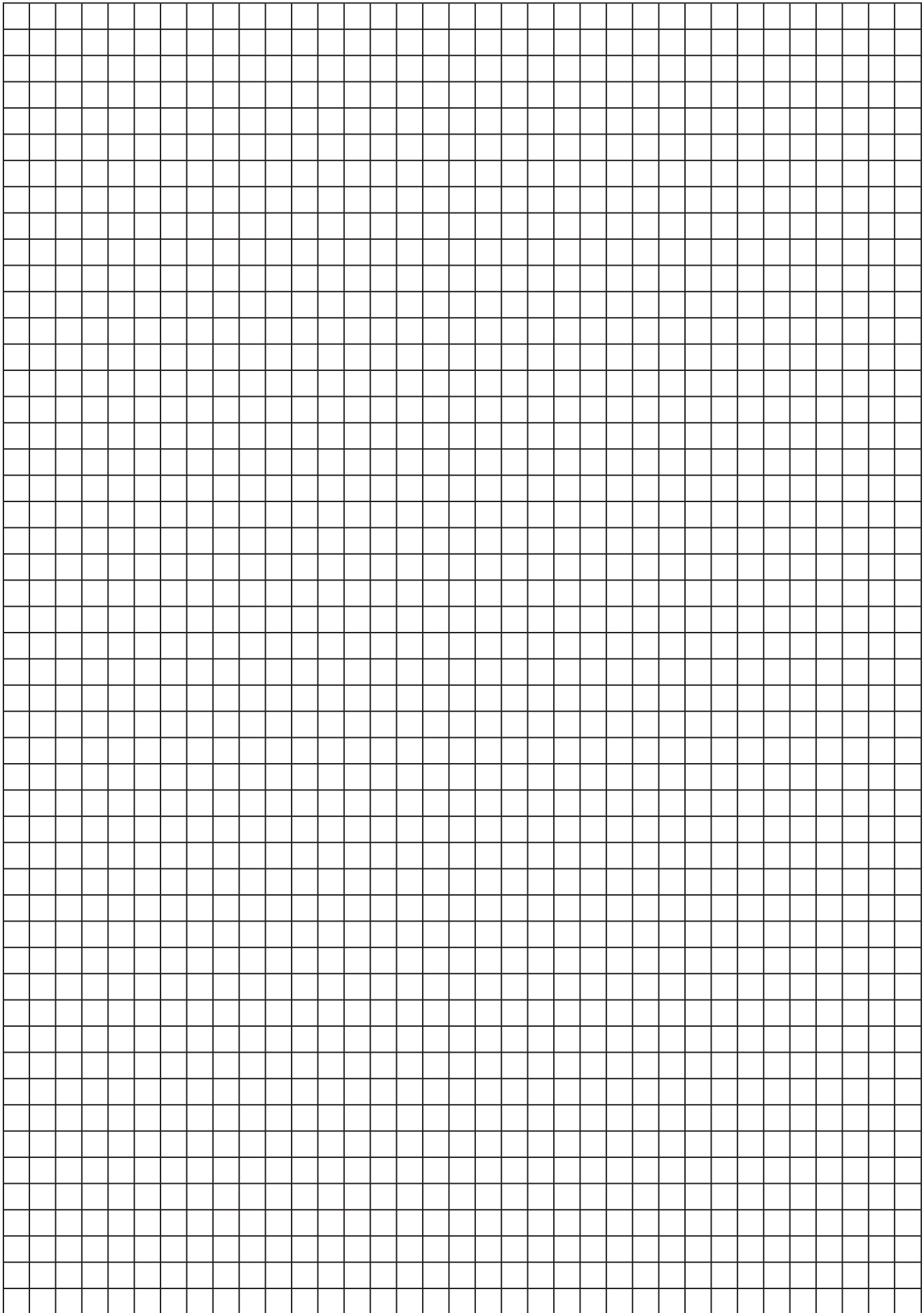
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**Scrap Graph Paper — This sheet will *not* be scored.**



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## 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

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

# INTEGRATED ALGEBRA

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Printed on Recycled Paper

INTEGRATED ALGEBRA



# FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

## INTEGRATED ALGEBRA

Wednesday, August 17, 2011 — 8:30 to 11:30 a.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.

**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 Wednesday, August 17, 2011. 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.

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

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]  $c = \frac{ab}{b+a}$ , and appropriate work is shown.

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

*or*

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

*or*

[1]  $c(b+a) = ab$ , but no further correct work is shown.

*or*

[1]  $c = \frac{ab}{b+a}$ , 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] A correct frequency histogram is drawn and labeled.

[1] Appropriate work is shown, but one graphing or labeling error is made.

*or*

[1] Appropriate work is shown, but one conceptual error is made, such as drawing a bar graph.

[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] 2.54, 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.

*or*

[1]  $\frac{77,120 + 33,500}{43,560}$  or an equivalent expression is written, but no further correct work is shown.

*or*

[1] Appropriate work is shown to find 1.77 and 0.77, but no further correct work is shown.

*or*

[1] 2.54, 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.

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### 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] Both equations are graphed correctly, at least one is labeled, and an appropriate explanation is written.

[2] One graphing error is made, but an appropriate explanation is written.

*or*

[2] Both equations are graphed correctly, and at least one is labeled, but no explanation or an incorrect explanation is written.

[1] Two or more graphing errors are made, but an appropriate explanation is written.

*or*

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

*or*

[1] One equation is graphed and labeled correctly, but no further correct work is shown.

*or*

[1] No graph is shown, but an appropriate 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.

(35) [3] 41.8, and appropriate work is shown.

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

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

*or*

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

*or*

[1]  $\sin x = \frac{8}{12}$ , but no further correct work is shown.

*or*

[1] 41.8, 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]  $-2\sqrt{3}$ , and appropriate work is shown.

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

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

*or*

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

*or*

[1] One term is simplified correctly, but no further correct work is shown.

*or*

[1]  $-2\sqrt{3}$ , 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.

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## 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]  $\frac{8}{1,320}$  and  $\frac{144}{1,320}$  or equivalent answers, and appropriate work is shown.

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

*or*

[3] Appropriate work is shown to find  $\frac{144}{1,320}$  or an equivalent answer, but no further correct work is shown.

[2] Appropriate work is shown, but two or more computational, rounding, or simplification 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.

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

*or*

[1] Appropriate work is shown to find  $\frac{8}{1,320}$  or an equivalent answer, but no further correct work is shown.

*or*

[1]  $\frac{8}{1,320}$  and  $\frac{144}{1,320}$  or equivalent answers, 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] Both equations are graphed correctly, and (2,5) and (5,2) are stated.
- [3] Appropriate work is shown, but one graphing error is made, but appropriate solutions are stated.
- or*
- [3] Both equations are graphed correctly, but only one correct solution is stated.
- [2] Appropriate work is shown, but two or more graphing 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] Both equations are graphed correctly, but no correct solutions are stated.
- or*
- [2] (2,5) and (5,2) are stated, but a method other than graphic is used correctly.
- [1] Appropriate work is shown, but one conceptual error and one graphing error are made, but appropriate solutions are stated.
- or*
- [1] One of the equations is graphed correctly, but no further correct work is shown.
- or*
- [1] (2,5) and (5,2) are stated, 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] 15, and appropriate 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.

*or*

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

*or*

[2]  $2m + 15(m - 1) = 20(m - 3)$  or an equivalent equation is written, but no further correct work is shown.

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

*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.

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## Map to Core Curriculum

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

### Regents Examination in Integrated Algebra August 2011

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

**The *Chart for Determining the Final Examination Score for the August 2011 Regents Examination in Integrated Algebra* will be posted on the Department's web site at: <http://www.p12.nysed.gov/apda/> on Wednesday, August 17, 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.

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

**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.