

# MATHEMATICS A

Thursday, June 15, 2006 — 1:15 to 4:15 p.m., only

Print Your Name:

Print Your School's Name:

Print your name and the name of your school in the boxes 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.

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. All work should be written in pen, except graphs and drawings, which should be done in pencil.

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. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc.

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 minimum of a scientific calculator, a straightedge (ruler), and a compass 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 questions in this part. Each correct answer will receive 2 credits. No partial credit will be allowed. For each question, write on the separate answer sheet the numeral preceding the word or expression that best completes the statement or answers the question. [60]

- 1 In the accompanying diagram, line  $a$  intersects line  $b$ .

Use this space for computations.



What is the value of  $x$ ?

- (1)  $-10$                       (3)  $10$   
(2)  $5$                             (4)  $90$
- 2 What is the value of  $x$  in the equation  $13x - 2(x + 4) = 8x + 1$ ?
- (1)  $1$                               (3)  $3$   
(2)  $2$                               (4)  $4$
- 3 One function of a movie projector is to enlarge the image on the film. This procedure is an example of a
- (1) line of symmetry              (3) translation  
(2) line reflection                (4) dilation

- 4 What is the product of  $\frac{1}{3}x^2y$  and  $\frac{1}{6}xy^3$ ?

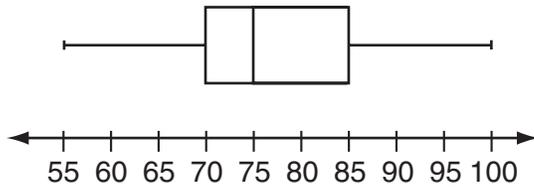
- (1)  $\frac{1}{2}x^2y^3$                       (3)  $\frac{1}{18}x^2y^3$   
(2)  $\frac{1}{9}x^3y^4$                       (4)  $\frac{1}{18}x^3y^4$

- 5 What is the value of  $\frac{8!}{4!}$ ?

- (1)  $1,680$                       (3)  $2!$   
(2)  $2$                               (4)  $4!$



- 10 The accompanying box-and-whisker plot represents the scores earned on a science test.



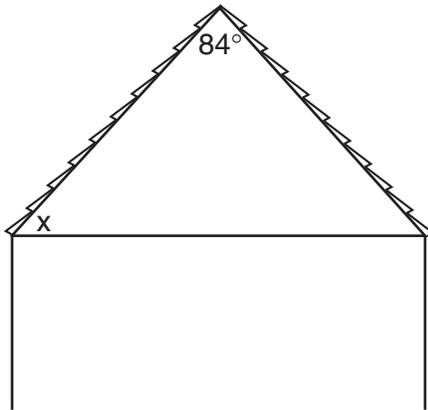
Use this space for computations.

What is the median score?

- (1) 70                                      (3) 77  
(2) 75                                      (4) 85
- 11 The second side of a triangle is two more than the first side, and the third side is three less than the first side. Which expression represents the perimeter of the triangle?
- (1)  $x + 5$                                       (3)  $3x - 1$   
(2)  $2x - 1$                                       (4)  $x^2 - x - 6$
- 12 What is the value of  $x$  in the equation  $\frac{x}{2x+1} = \frac{4}{3}$ ?
- (1)  $-\frac{1}{5}$                                       (3)  $-\frac{5}{4}$   
(2)  $-\frac{4}{5}$                                       (4)  $-5$
- 13 Which statement describes the graph of  $x = 4$ ?
- (1) It passes through the point  $(0,4)$ .  
(2) It has a slope of 4.  
(3) It is parallel to the  $y$ -axis.  
(4) It is parallel to the  $x$ -axis.
- 14 Given the statement: "If  $x$  is a rational number, then  $\sqrt{x}$  is irrational."  
Which value of  $x$  makes the statement *false*?
- (1)  $\frac{3}{2}$                                       (3) 3  
(2) 2                                      (4) 4

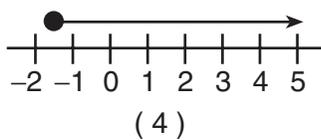
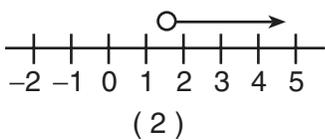
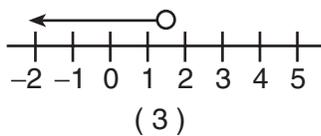
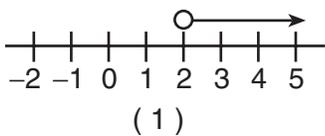
- 15 The accompanying diagram shows the roof of a house that is in the shape of an isosceles triangle. The vertex angle formed at the peak of the roof is  $84^\circ$ .

Use this space for computations.



What is the measure of  $x$ ?

- (1)  $138^\circ$                       (3)  $84^\circ$   
 (2)  $96^\circ$                       (4)  $48^\circ$
- 16 Which graph best represents the solution set for the inequality  $x > \sqrt{2}$  ?



- 17 The formula for the volume of a right circular cylinder is  $V = \pi r^2 h$ . The value of  $h$  can be expressed as

- (1)  $\frac{V}{\pi} r^2$                       (3)  $\frac{\pi r^2}{V}$   
 (2)  $\frac{V}{\pi r^2}$                       (4)  $V - \pi r^2$

18 If a line is horizontal, its slope is

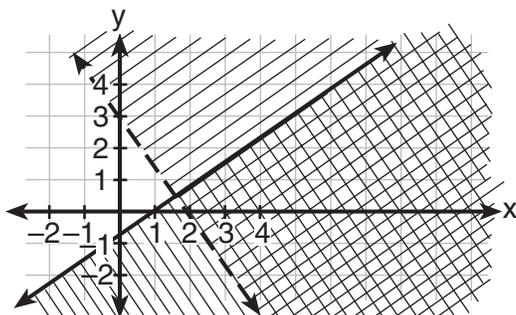
- (1) 1
- (2) 0
- (3) undefined
- (4) negative

Use this space for computations.

19 Chantrice is pulling a wagon along a smooth, horizontal street. The path of the center of one of the wagon wheels is best described as

- (1) a circle
- (2) a line perpendicular to the road
- (3) a line parallel to the road
- (4) two parallel lines

20 Which coordinate point is in the solution set for the system of inequalities shown in the accompanying graph?



- (1) (3,1)
- (2) (2,2)
- (3) (1,-1)
- (4) (0,1)

21 The measures of two complementary angles are represented by  $(3x + 15)$  and  $(2x - 10)$ . What is the value of  $x$ ?

- (1) 17
- (2) 19
- (3) 35
- (4) 37

22 If  $x = 3$ , which statement is *false*?

- (1)  $x$  is prime and  $x$  is odd.
- (2)  $x$  is odd or  $x$  is even.
- (3)  $x$  is not prime and  $x$  is odd.
- (4)  $x$  is odd and  $2x$  is even.

**23** Factored completely, the expression  $2y^2 + 12y - 54$  is equivalent to

- (1)  $2(y + 9)(y - 3)$                       (3)  $(y + 6)(2y - 9)$   
(2)  $2(y - 3)(y - 9)$                       (4)  $(2y + 6)(y - 9)$

**Use this space for computations.**

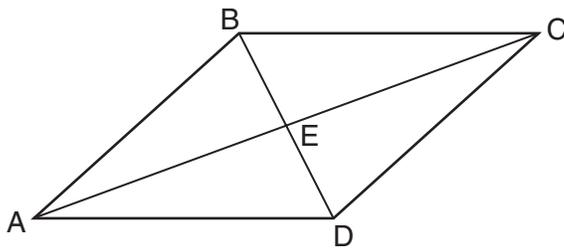
**24** Which statement best illustrates the additive identity property?

- (1)  $6 + 2 = 2 + 6$                       (3)  $6 + (-6) = 0$   
(2)  $6(2) = 2(6)$                       (4)  $6 + 0 = 6$

**25** The expression  $\frac{5x}{6} + \frac{x}{4}$  is equivalent to

- (1)  $\frac{3x}{5}$                                       (3)  $\frac{13x}{12}$   
(2)  $\frac{5x^2}{10}$                                   (4)  $\frac{5x}{24}$

**26** In the accompanying diagram of parallelogram  $ABCD$ , diagonals  $\overline{AC}$  and  $\overline{BD}$  intersect at  $E$ ,  $BE = \frac{2}{3}x$ , and  $ED = x - 10$ .



What is the value of  $x$ ?

- (1)  $-30$                                       (3)  $-6$   
(2)  $30$                                         (4)  $6$

Use this space for computations.

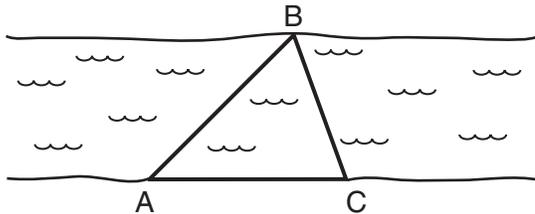
27 Expressed in simplest radical form, the product of  $\sqrt{6} \cdot \sqrt{15}$  is

- (1)  $\sqrt{90}$                       (3)  $9\sqrt{10}$   
(2)  $3\sqrt{10}$                     (4)  $3\sqrt{15}$

28 What is the sum of  $6 \times 10^3$  and  $3 \times 10^2$ ?

- (1)  $6.3 \times 10^3$                 (3)  $9 \times 10^6$   
(2)  $9 \times 10^5$                 (4)  $18 \times 10^5$

29 On the banks of a river, surveyors marked locations A, B, and C. The measure of  $\angle ACB = 70^\circ$  and the measure of  $\angle ABC = 65^\circ$ .



Which expression shows the relationship between the lengths of the sides of this triangle?

- (1)  $AB < BC < AC$             (3)  $BC < AC < AB$   
(2)  $BC < AB < AC$             (4)  $AC < AB < BC$

30 Which inequality represents the probability,  $x$ , of any event happening?

- (1)  $x \geq 0$                         (3)  $x < 1$   
(2)  $0 < x < 1$                 (4)  $0 \leq x \leq 1$
-

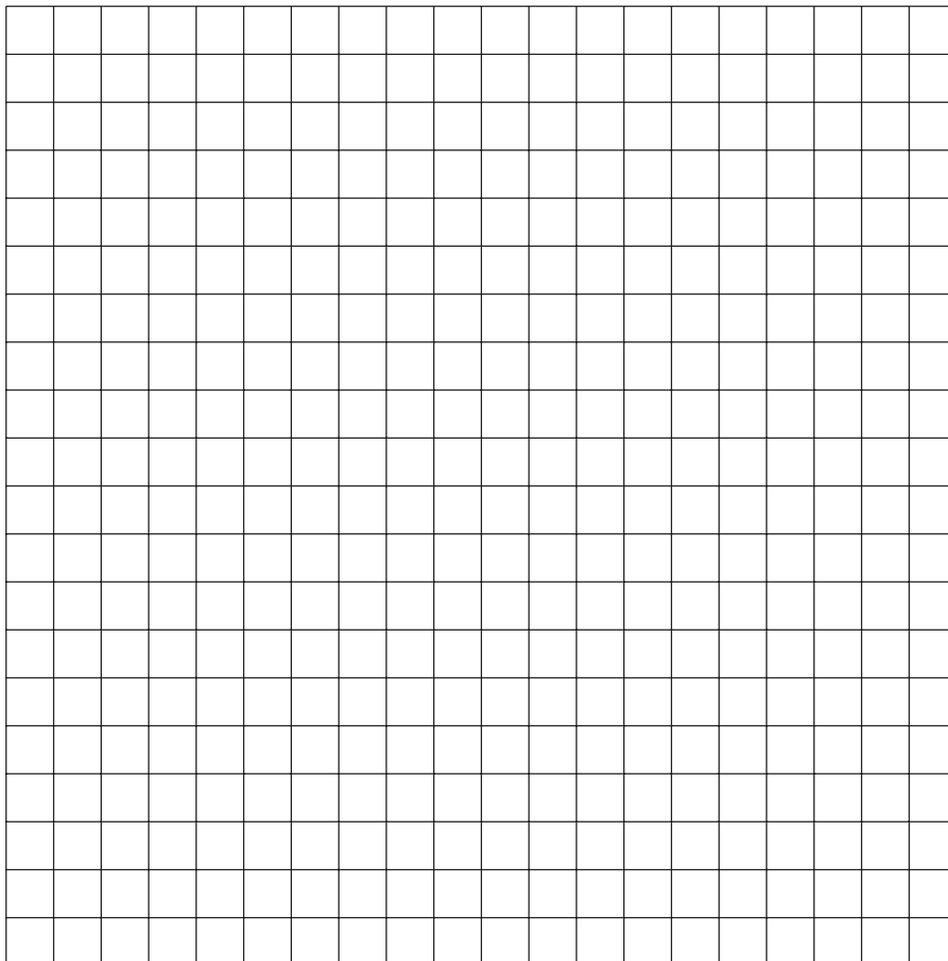
## Part II

Answer all 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. [10]

31 Determine the area, in square feet, of the *smallest* square that can contain a circle with a radius of 8 feet.

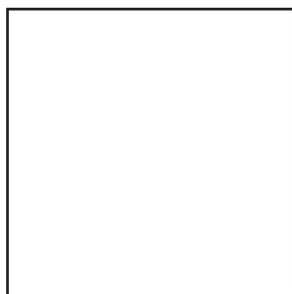
32 Five friends met for lunch, and they all shook hands. Each person shook the other person's right hand only once. What was the total number of handshakes?

**33** Two hikers started at the same location. One traveled 2 miles east and then 1 mile north. The other traveled 1 mile west and then 3 miles south. At the end of their hikes, how many miles apart are the two hikers? [The use of the accompanying grid is optional.]



**34** Solve for  $x$ :  $3.3 - x = 3(x - 1.7)$

**35** On the accompanying square, draw all the lines of symmetry.



### Part III

Answer all 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. [6]

- 36 Tamara has two sisters. One of the sisters is 7 years older than Tamara. The other sister is 3 years younger than Tamara. The product of Tamara's sisters' ages is 24. How old is Tamara?

**37** Sara's test scores in mathematics were 64, 80, 88, 78, 60, 92, 84, 76, 86, 78, 72, and 90. Determine the mean, the median, and the mode of Sara's test scores.

### Part IV

Answer all 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. [8]

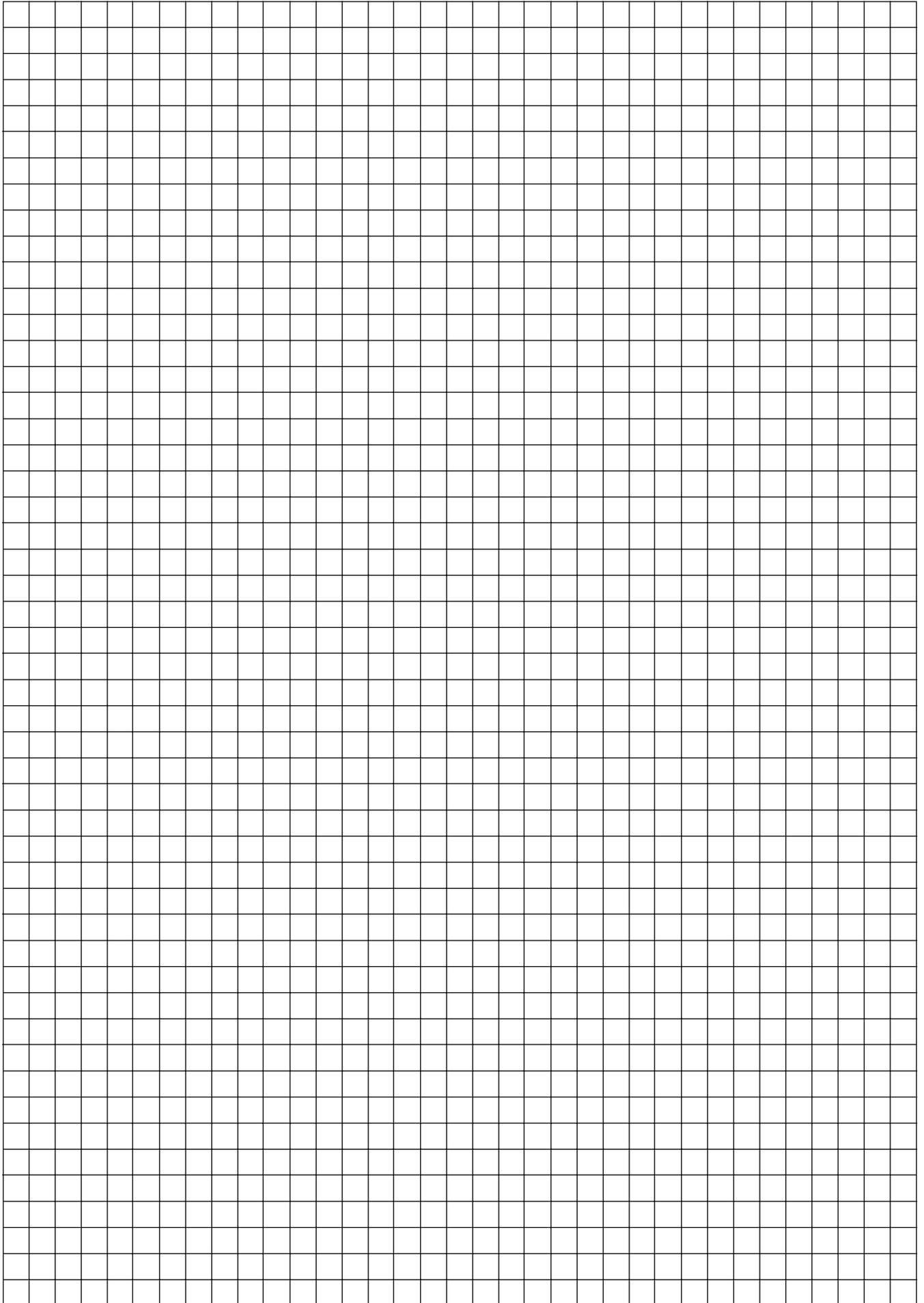
38 Sharu has \$2.35 in nickels and dimes. If he has a total of thirty-two coins, how many of *each* coin does he have?

**39** A person measures the angle of depression from the top of a wall to a point on the ground. The point is located on level ground 62 feet from the base of the wall and the angle of depression is  $52^\circ$ . How high is the wall, to the *nearest tenth of a foot*?

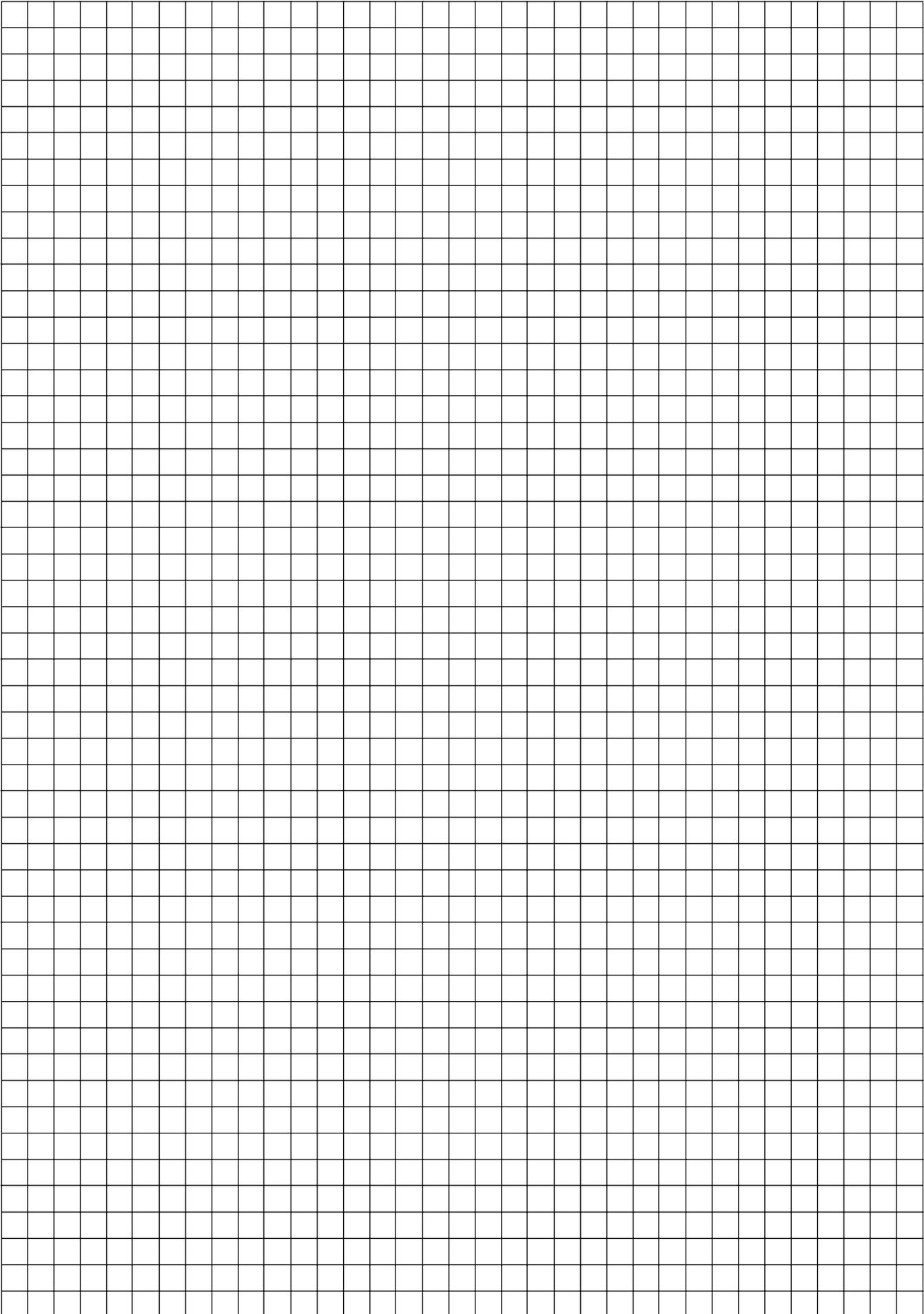
Scrap Graph Paper — This sheet will *not* be scored.

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



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The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

MATHEMATICS A

Thursday, June 15, 2006 — 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 should 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



# FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

## MATHEMATICS A

Thursday, June 15, 2006 — 1:15 to 4:15 p.m., only

### SCORING KEY

#### Mechanics of Rating

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

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

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

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

Raters should record the student's scores for all questions and the total raw score on the student's detachable answer sheet. Then the student's total raw score should be converted to a scaled score by using the conversion chart that will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Thursday, June 15, 2006. The student's scaled score should be entered in the box provided on the student's detachable answer sheet. The scaled score is the student's final examination score.

#### Part I

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

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

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

### **General Rules for Applying Mathematics Rubrics**

#### **I. General Principles for Rating**

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

#### **II. Full-Credit Responses**

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

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

#### **III. Appropriate Work**

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

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

#### **IV. Multiple Errors**

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

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

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

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

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

**Part II**

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

- (31) [2] 256, and appropriate work is shown, such as finding the side of the square and calculating the area.

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

*or*

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

*or*

[1] Appropriate work is shown, but only the area of the circle is found.

*or*

[1] An incorrect value for the side of the square is determined, but an appropriate area is found.

*or*

[1] A correct value for the side of the square is determined, but the area is not found or is found incorrectly.

*or*

[1] The area for the square inscribed in the circle is found, resulting in an answer of 128.

*or*

[1] 256, 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] 10, and appropriate work is shown, such as  ${}_5C_2$  or a diagram or a list.

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

*or*

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

*or*

[1] 10, 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.

MATHEMATICS A – *continued*

(33) [2] 5, and appropriate work is shown, such as the distance formula, the Pythagorean theorem, or a Pythagorean triple.

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

*or*

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

*or*

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

*or*

[1] 5, 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.

(34) [2] 2.1, and appropriate work is shown.

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

*or*

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

*or*

[1] 2.1, 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.

MATHEMATICS A – *continued*

- (35) [2] The four correct lines of symmetry are drawn.
- [1] At least two correct lines of symmetry are drawn, and no inappropriate lines are drawn.
- or***
- [1] All four correct lines of symmetry are drawn, but one or more inappropriate lines are also drawn.
- [0] At least one of the correct lines of symmetry is missing, and one or more inappropriate lines are drawn.
- or***
- [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 three credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

- (36) [3] 5, and appropriate work is shown, such as the quadratic equation  $(x + 7)(x - 3) = 24$  or trial and error with at least three trials and appropriate checks.
- [2] A correct quadratic equation is written, but one computational error is made in finding Tamara's age.
- or***
- [2] 12 and 2 are found as the sisters' ages, but Tamara's age is not found.
- or***
- [2] The trial-and-error method is used to find the correct solution, but only two trials and appropriate checks are shown.
- [1] Appropriate work is shown, but two or more computational errors are made.
- or***
- [1] Appropriate work is shown, but one conceptual error is made.
- or***
- [1] A correct quadratic equation is written, but no further correct work is shown.
- or***
- [1] An incorrect equation of equal difficulty is solved appropriately for Tamara's age.
- or***
- [1] The trial-and-error method is attempted and at least six systematic trials and appropriate checks are shown, but no solution is found.
- or***
- [1] 5, but no work or only one trial with an appropriate check 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.

MATHEMATICS A – *continued*

(37) [3] Mean = 79, median = 79, and mode = 78, and appropriate work is shown.

[2] Appropriate work is shown, but only two of the three measures of central tendency are determined and identified correctly.

*or*

[2] Appropriate work is shown and all three measures of central tendency are determined correctly, but the measures are not identified or are identified incorrectly.

[1] Appropriate work is shown, but only one of the three measures of central tendency is determined and identified correctly.

*or*

[1] Mean = 79, median = 79, and mode = 78, but no work is shown.

[0] 79, 79, and 78, but no work is shown, and the answers are not identified or are identified incorrectly.

*or*

[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 four credits. Unless otherwise specified, mathematically correct alternative solutions should be awarded appropriate credit.

(38) [4] 17 nickels and 15 dimes, and appropriate work is shown, such as the equation  $0.05x + 0.10(32 - x) = 2.35$  or trial and error with at least three trials and appropriate checks.

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

*or*

[3] Appropriate work is shown, and the correct answers are found, but they are not labeled or are labeled incorrectly.

*or*

[3] Appropriate work is shown, but only the correct number of nickels or the correct number of dimes is found and labeled.

[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] The trial-and-error method is used to find the correct solution, but only two trials and appropriate checks are shown.

*or*

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

*or*

[2] An incorrect system of equations of equal difficulty is solved appropriately for both the number of nickels and dimes.

*or*

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

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

*or*

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

*or*

[1] 17 nickels and 15 dimes, but no work or only one trial with an appropriate check is shown.

[0] 17 nickels *or* 15 dimes, but no work or only one trial with an appropriate check is shown.

*or*

[0] 17 and 15, but no work is shown, and the answers are not labeled or are labeled incorrectly.

*or*

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

MATHEMATICS A – *continued*

- (39) [4] 79.4, and appropriate work is shown, such as  $\tan 52 = \frac{x}{62}$ .
- [3] Appropriate work is shown, but one computational or rounding error is made.
- or***
- [3] An incorrectly labeled diagram is drawn, but the appropriate trigonometric function is used, and an appropriate answer is found.
- [2] Appropriate work is shown, but two or more computational or rounding errors are made.
- or***
- [2] Appropriate work is shown, but one conceptual error is made, such as using an incorrect trigonometric function or ratio.
- [1] Appropriate work is shown, but one conceptual error and one computational or rounding error are made.
- or***
- [1] A correctly labeled diagram is drawn, but no further correct work is shown.
- or***
- [1] A correct equation is written, but no further correct work is shown.
- or***
- [1] An incorrectly labeled diagram is drawn, but an appropriate equation is written, but no further correct work is shown.
- or***
- [1] 79.4, 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.
-

**Map to Learning Standards**

<b>Key Ideas</b>	<b>Item Numbers</b>
Mathematical Reasoning	14, 22
Number and Numeration	9, 16, 24
Operations	3, 4, 23, 25, 27, 28, 35
Modeling/Multiple Representation	1, 6, 11, 15, 17, 19, 21, 26, 29
Measurement	8, 10, 18, 31, 33, 37, 39
Uncertainty	5, 7, 30, 32
Patterns/Functions	2, 12, 13, 20, 34, 36, 38

**Regents Examination in Mathematics A**

**June 2006**

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

**The *Chart for Determining the Final Examination Score for the June 2006 Regents Examination in Mathematics A* will be posted on the Department’s web site <http://www.emsc.nysed.gov/osa/> on Thursday, June 15, 2006. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students’ final scores for this administration.**

**The *Teacher Evaluation of State Examinations* forms will also be posted on the same web site. Please select the link “Teacher Evaluation Forms” and then the examination title to complete the evaluation form for the *June 2006 Regents Examination in Mathematics A*.**



## Regents Examination in Mathematics A June 2006

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

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

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

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

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