

MATHEMATICS A

Thursday, June 16, 2005 — 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. 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 your 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]

Use this space for computations.

- 1 Jeremy's bedroom has two doors leading into the hallway. His house has four doors leading to the outside. Using the doorways, in how many different ways can Jeremy leave his room and go outside?

(1) 8 (3) 5
(2) 6 (4) 4

- 2 The amount of time, t , in seconds, it takes an object to fall a distance, d , in meters, is expressed by the formula $t = \sqrt{\frac{d}{4.9}}$. Approximately how long will it take an object to fall 75 meters?

(1) 0.26 sec (3) 3.9 sec
(2) 2.34 sec (4) 7.7 sec

- 3 Which equation illustrates the distributive property?

(1) $5(a + b) = 5a + 5b$ (3) $a + (b + c) = (a + b) + c$
(2) $a + b = b + a$ (4) $a + 0 = a$

- 4 The mass of an orchid seed is approximately 0.0000035 gram. Written in scientific notation, that mass is equivalent to 3.5×10^n . What is the value of n ?

(1) -8 (3) -6
(2) -7 (4) -5

- 5 A cake recipe calls for 1.5 cups of milk and 3 cups of flour. Seth made a mistake and used 5 cups of flour. How many cups of milk should he use to keep the proportions correct?

(1) 1.75 (3) 2.25
(2) 2 (4) 2.5

6 When $3x^2 - 6x$ is divided by $3x$, the result is

(1) $-2x$

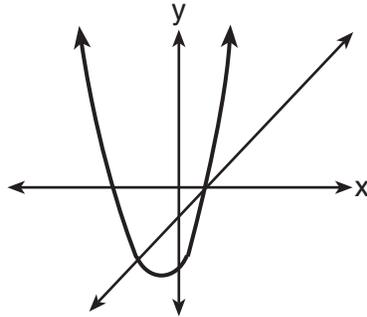
(3) $x + 2$

(2) $2x$

(4) $x - 2$

Use this space for computations.

7 The accompanying diagram shows the graphs of a linear equation and a quadratic equation.



How many solutions are there to this system of equations?

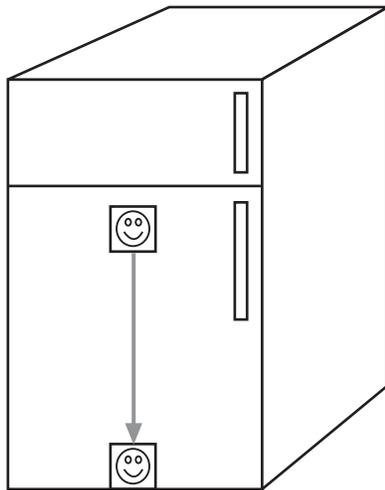
(1) 1

(3) 3

(2) 2

(4) 0

8 A picture held by a magnet to a refrigerator slides to the bottom of the refrigerator, as shown in the accompanying diagram.



This change of position is an example of a

(1) translation

(3) rotation

(2) dilation

(4) reflection

- 9 Jorge made the accompanying stem-and-leaf plot of the weights, in pounds, of each member of the wrestling team he was coaching.

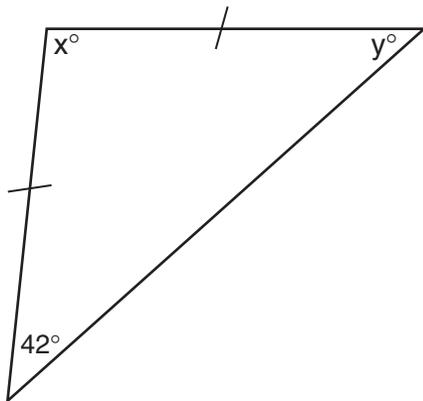
Use this space for computations.

Stem	Leaf
10	9
11	
12	3 8
13	2 4 4 6 8
14	1 3 5 5 9
15	2 3 7 7 9
16	1 3 7 8 8 8 9
17	3 8

Key: 16 | 1 = 161

What is the mode of the weights?

- (1) 145 (3) 152
 (2) 150 (4) 168
- 10 Tina wants to sew a piece of fabric into a scarf in the shape of an isosceles triangle, as shown in the accompanying diagram.



What are the values of x and y ?

- (1) $x = 42$ and $y = 96$ (3) $x = 90$ and $y = 48$
 (2) $x = 69$ and $y = 69$ (4) $x = 96$ and $y = 42$
- 11 The expression $(x^2 - 5x - 2) - (-6x^2 - 7x - 3)$ is equivalent to
- (1) $7x^2 - 12x - 5$ (3) $7x^2 + 2x + 1$
 (2) $7x^2 - 2x + 1$ (4) $7x^2 + 2x - 5$

Use this space for
computations.

12 The expression $\sqrt{50} + \sqrt{32}$ is equivalent to

- (1) $9\sqrt{2}$ (3) 6
(2) $\sqrt{82}$ (4) 18

13 If $7x + 2a = 3x + 5a$, then x is equivalent to

- (1) $\frac{7a}{10}$ (3) $\frac{3a}{10}$
(2) $\frac{7a}{4}$ (4) $\frac{3a}{4}$

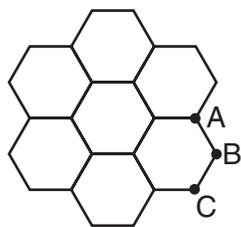
14 What is the solution set of the equation $x^2 + 11x + 28 = 0$?

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

15 Which set could *not* represent the lengths of the sides of a triangle?

- (1) $\{3, 4, 5\}$ (3) $\{5, 10, 12\}$
(2) $\{2, 5, 9\}$ (4) $\{7, 9, 11\}$

16 The accompanying figure represents a section of bathroom floor tiles shaped like regular hexagons.



What is the measure of angle ABC ?

- (1) 60° (3) 120°
(2) 90° (4) 150°

Use this space for computations.

17 The statement “If x is prime, then it is odd” is *false* when x equals

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

18 If $x \neq 0$, then $\frac{(x^2)^3}{x^5} \cdot 1000$ is equivalent to

- (1) $1000x$
- (2) $1000 + x$
- (3) 1000
- (4) 0

19 If $-2x + 3 = 7$ and $3x + 1 = 5 + y$, the value of y is

- (1) 1
- (2) 0
- (3) -10
- (4) 10

20 What is the converse of the statement “If it is Sunday, then I do not go to school”?

- (1) If I do not go to school, then it is Sunday.
- (2) If it is not Sunday, then I do not go to school.
- (3) If I go to school, then it is not Sunday.
- (4) If it is not Sunday, then I go to school.

21 If point $(-1,0)$ is on the line whose equation is $y = 2x + b$, what is the value of b ?

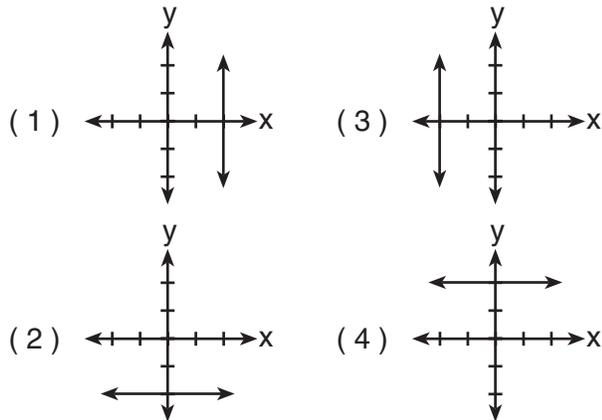
- (1) 1
- (2) 2
- (3) 3
- (4) 0

22 If $r = 2$ and $s = -7$, what is the value of $|r| - |s|$?

- (1) 5
- (2) -5
- (3) 9
- (4) -9

Use this space for computations.

23 Which graph represents the equation $x = 2$?



24 On a scale drawing of a new school playground, a triangular area has sides with lengths of 8 centimeters, 15 centimeters, and 17 centimeters. If the triangular area located on the playground has a perimeter of 120 meters, what is the length of its longest side?

- (1) 24 m
- (2) 40 m
- (3) 45 m
- (4) 51 m

25 If a and b are both odd integers, which expression must always equal an odd integer?

- (1) $a + b$
- (2) $a - b$
- (3) $a \cdot b$
- (4) $\frac{a}{b}$

26 Which quadrilateral must have diagonals that are congruent and perpendicular?

- (1) rhombus
- (2) square
- (3) trapezoid
- (4) parallelogram

Use this space for computations.

27 The length of a side of a square window in Jessica's bedroom is represented by $2x - 1$. Which expression represents the area of the window?

- (1) $2x^2 + 1$ (3) $4x^2 + 4x - 1$
(2) $4x^2 + 1$ (4) $4x^2 - 4x + 1$

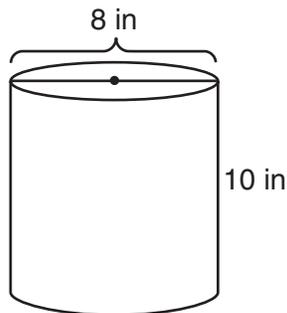
28 Which equation represents a line that is perpendicular to the line whose equation is $-2y = 3x + 7$?

- (1) $y = x + 7$ (3) $y = \frac{2}{3}x - 3$
(2) $2y = 3x - 3$ (4) $y = \frac{3}{2}x - 3$

29 The probability that the Cubs win their first game is $\frac{1}{3}$. The probability that the Cubs win their second game is $\frac{3}{7}$. What is the probability that the Cubs win both games?

- (1) $\frac{16}{21}$ (3) $\frac{6}{7}$
(2) $\frac{1}{7}$ (4) $\frac{2}{5}$

30 A storage container in the shape of a right circular cylinder is shown in the accompanying diagram.



What is the volume of this container, to the *nearest hundredth*?

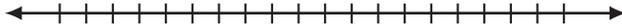
- (1) 56.55 in^3 (3) 251.33 in^3
(2) 125.66 in^3 (4) 502.65 in^3
-

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 A ribbon 56 centimeters long is cut into two pieces. One of the pieces is three times longer than the other. Find the lengths, in centimeters, of *both* pieces of ribbon.

32 The manufacturer of Ron's car recommends that the tire pressure be at least 26 pounds per square inch and less than 35 pounds per square inch. On the accompanying number line, graph the inequality that represents the recommended tire pressure.



33 In a survey of 400 teenage shoppers at a large mall, 240 said they shopped at Abernathy's, 210 said they shopped at Bongo Republic, and 90 said they shopped at both stores. How many of the teenage shoppers surveyed did not shop at either store?

34 An algebra class of 21 students must send 5 students to meet with the principal. How many different groups of 5 students could be formed from this class?

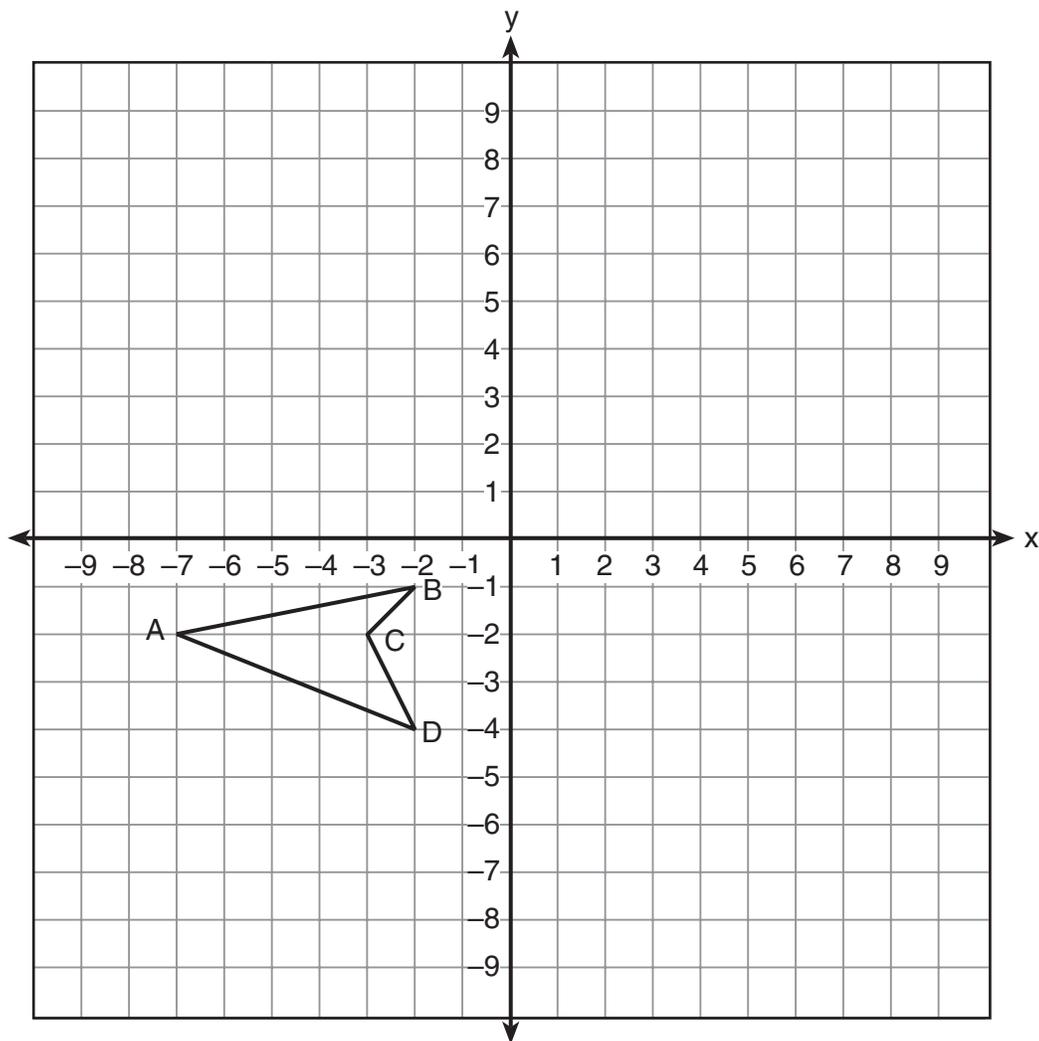
35 Factor completely: $3x^2 + 15x - 42$

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 Mr. James wanted to plant a garden that would be in the shape of a rectangle. He was given 80 feet of fencing to enclose his garden. He wants the length to be 10 feet more than twice the width. What are the dimensions, in feet, for a rectangular garden that will use exactly 80 feet of fencing?

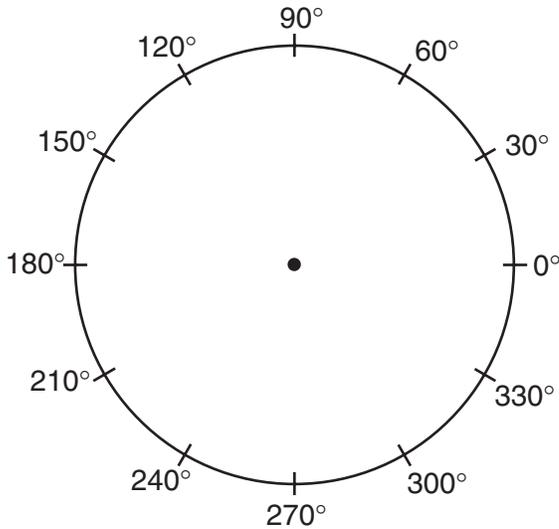
37 On the accompanying set of axes, draw the reflection of $ABCD$ in the y -axis. Label and state the coordinates of the reflected figure.



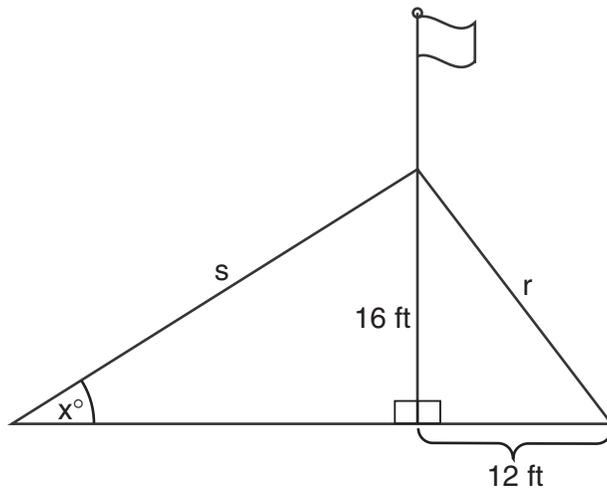
Part IV

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 In a class of 24 students, 10 have brown hair, 8 have black hair, 4 have blond hair, and 2 have red hair. On the accompanying diagram, construct a circle graph to show the students' hair color.



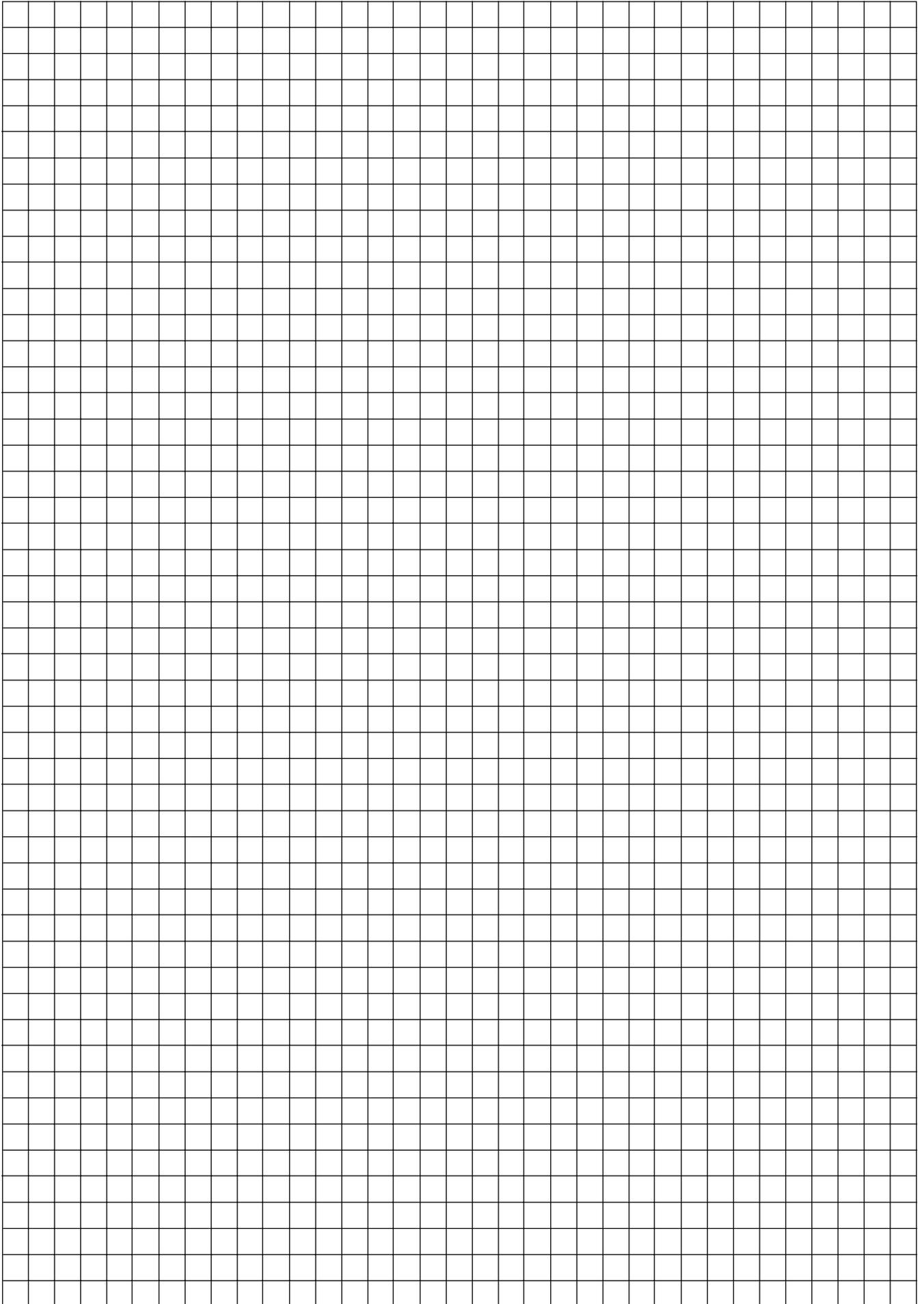
- 39 The accompanying diagram shows a flagpole that stands on level ground. Two cables, r and s , are attached to the pole at a point 16 feet above the ground. The combined length of the two cables is 50 feet. If cable r is attached to the ground 12 feet from the base of the pole, what is the measure of the angle, x , to the *nearest degree*, that cable s makes with the ground?



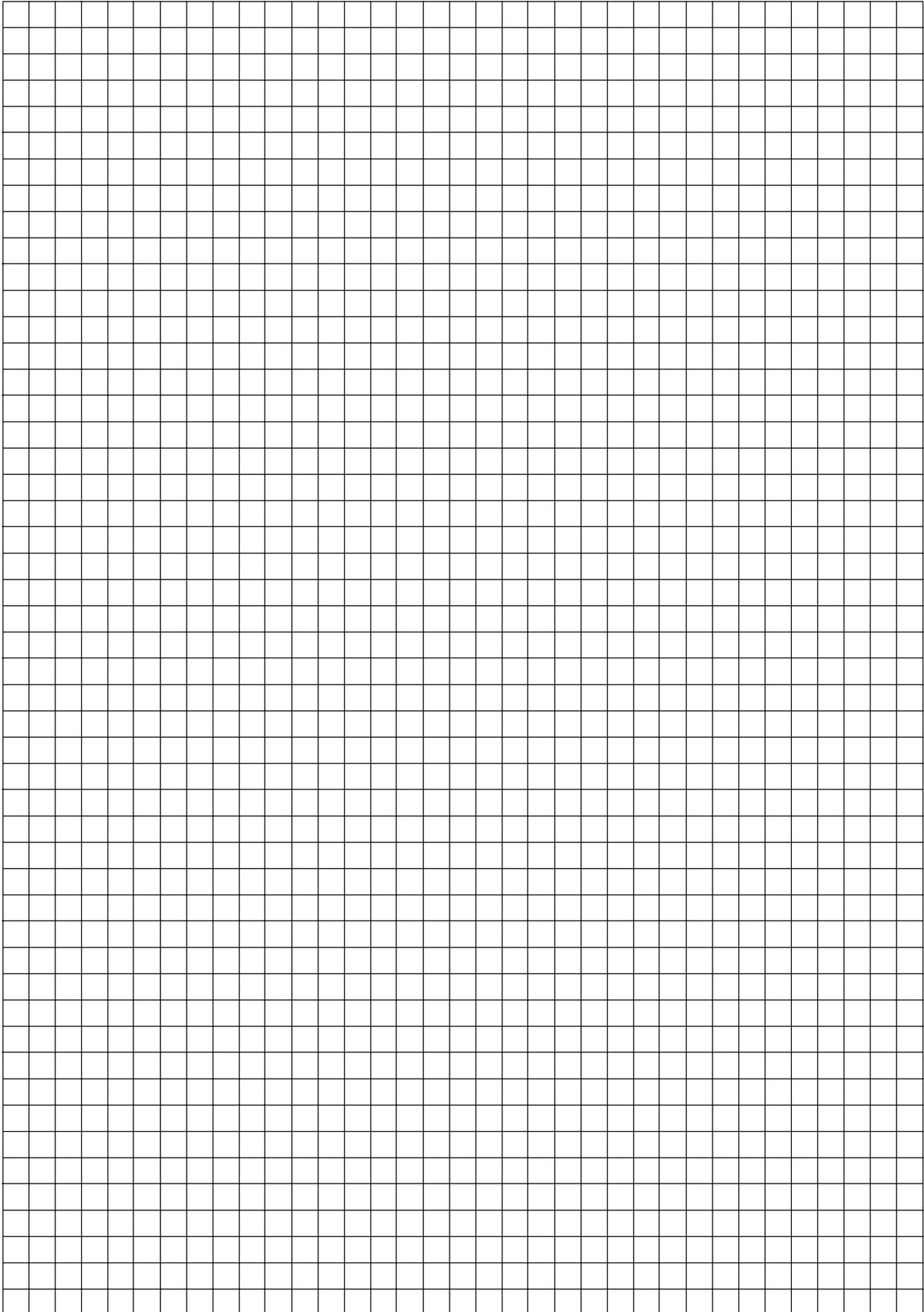
Scrap Graph Paper — This sheet will *not* be scored.

Tear Here

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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 16, 2005 — 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 16, 2005 — 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 Administering and 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 16, 2005. 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) 1	(6) 4	(11) 3	(16) 3	(21) 2	(26) 2
(2) 3	(7) 2	(12) 1	(17) 2	(22) 2	(27) 4
(3) 1	(8) 1	(13) 4	(18) 1	(23) 1	(28) 3
(4) 3	(9) 4	(14) 2	(19) 3	(24) 4	(29) 2
(5) 4	(10) 4	(15) 2	(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. Visit the site <http://www.emsc.nysed.gov/osa/> and select the link “Latest Information” for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and at least one more time before the final scores for the examination are recorded.

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 Administering and Scoring 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] 14 and 42, and appropriate work is shown, such as $x + 3x = 56$, a table, or trial and error with at least three trials and appropriate checks.

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

or

[1] Appropriate work is shown, but only one of the two lengths is found.

or

[1] A correct equation is written and solved, but the lengths are not stated.

or

[1] An incorrect equation of equal difficulty is solved appropriately.

or

[1] 14 and 42, but no work or fewer than three trials with appropriate checks are 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 graph is drawn on the number line, with a closed circle at the left end and an open circle at the right end.

[1] Appropriate work is shown, but one graphing error is made, such as writing an incorrect scale on the number line.

or

[1] Appropriate work is shown, but one conceptual error is made, such as using a closed circle instead of an open circle.

or

[1] A correct inequality is written, but the graph is not drawn.

[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] 40, and appropriate work is shown, such as a Venn diagram or $(240 + 210) - 90 = 360$ and $400 - 360 = 40$.

[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] 40, 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] 20,349, and appropriate work is shown, such as ${}_{21}C_5 = 20,349$.

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

or

[1] Appropriate work is shown, but one conceptual error is made, such as determining the value of ${}_{21}P_5$.

or

[1] 20,349, but no work is shown.

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

- (35) [2] $3(x + 7)(x - 2)$, and appropriate work is shown.

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

or

[1] A conceptual error is made, such as incomplete factoring.

or

[1] $3(x + 7)(x - 2)$, but no work is shown.

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

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] 10 and 30, and appropriate work is shown, such as $2x + 2(2x + 10) = 80$ or trial and error with at least three trials and appropriate checks.

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

or

[2] Appropriate work is shown, but only one of the dimensions is found.

or

[2] The trial-and-error method is used to find a 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] 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] An incorrect equation of equal difficulty is solved appropriately.

or

[1] Appropriate solutions are found based on the incorrect use of the perimeter formula, such as $3x + 10 = 80$.

or

[1] 10 and 30, but no work or only one trial with an appropriate check is shown.

[0] 10 *or* 30, but no work or only one trial with an appropriate check 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.

MATHEMATICS A – *continued*

(37) [3] The figure is drawn accurately and the new coordinates are labeled and stated as $A'(7,-2)$, $B'(2,-1)$, $C'(3,-2)$, and $D'(2,-4)$.

[2] One error is made in drawing the figure, such as misplotting one point, but the new coordinates are labeled and stated appropriately, based on that figure.

or

[2] The figure is drawn and labeled accurately, but the new coordinates are not stated or are stated incorrectly.

or

[2] The new coordinates are labeled and stated correctly, but the figure is not drawn.

[1] Two errors are made in drawing the reflected figure, but the new coordinates are labeled and stated appropriately, based on that figure.

or

[1] Appropriate work is shown, but one conceptual error is made, such as reflecting the figure in the x -axis or the origin.

or

[1] Correct points are plotted and labeled, but the figure is not drawn, and the coordinates are not stated.

or

[1] The figure is drawn correctly, but the new coordinates are not labeled or stated.

[0] An appropriate reflection in the x -axis is drawn, and the coordinates are not labeled or stated.

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.

- (38) [4] A correct circle graph is drawn and labeled, and appropriate work is shown, such as using proportions. [A correct graph will show 150° for brown, 120° for black, 60° for blond, and 30° for red.]
- [3] Appropriate work is shown, but one computational error is made, but an appropriate graph is drawn.
- or*
- [3] Appropriate work is shown, but one graphing error is made.
- or*
- [3] Appropriate work is shown and a correct graph is drawn, but the sectors are not labeled or are labeled incorrectly.
- [2] Appropriate work is shown, but two or more computational errors are made, but an appropriate graph is drawn.
- or*
- [2] Appropriate work is shown, but one conceptual error is made.
- or*
- [2] Correct numbers of degrees or correct proportional values are found, but two or more graphing errors are made.
- or*
- [2] Correct numbers of degrees or correct proportional values are found, but no graph is drawn.
- or*
- [2] A correct circle graph is drawn and labeled, but no work is shown.
- [1] Appropriate work is shown and a graph is drawn, but two or more computational errors and two or more graphing errors are made.
- or*
- [1] At least two numbers of degrees or proportional values are found correctly, but no graph or an incorrect graph is drawn.
- [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] 32, and appropriate work is shown, such as $12^2 + 16^2 = r^2$, $50 - r = s$, and $\sin x = \frac{16}{30}$.

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

or

[3] Appropriate work is shown to find $r = 20$ and $s = 30$ and the trigonometric equation $\sin x = \frac{16}{30}$ is written, but it is not solved or is solved incorrectly.

[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, such as using an incorrect trigonometric function to find the angle.

or

[2] The lengths of r and s are found correctly, but no further correct work is shown.

or

[2] Incorrect lengths are found for r and s , but the sine function is used correctly to find an appropriate angle.

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

or

[1] The length of r is found correctly, but no further correct work is shown.

or

[1] 32, 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

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

Regents Examination in Mathematics A

June 2005

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

The *Chart for Determining the Final Examination Score for the June 2005 Regents Examination in Mathematics A*, normally located on this page, will be posted on the Department’s web site <http://www.emsc.nysed.gov/osa/> on Thursday, June 16, 2005. Conversion charts provided for previous administrations of the Mathematics A examination must NOT be used to determine students’ final scores for this administration.



Regents Examination in Mathematics A June 2005

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

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.