

FOR TEACHERS ONLY

The University of the State of New York

REGENTS HIGH SCHOOL EXAMINATION

GEOMETRY

Tuesday, June 16, 2009 — 9:15 a.m. to 12:15 p.m., only

SCORING KEY AND RATING GUIDE

Mechanics of Rating

The following procedures are to be followed for scoring student answer papers for the Regents Examination in Geometry. More detailed information about scoring is provided in the publication *Information Booklet for Scoring the Regents Examination in Geometry*.

Use only a No. 2 pencil in rating the Regents Examination in Geometry. Do *not* attempt to correct the student's work by making insertions or changes of any kind. Scoring overlays have been included in the package of scoring materials and must be used to score Part I, the multiple-choice section. When scoring the examination:

- **cut out** the rectangular space on the bottom of the scoring overlay to record the total Part I score
- **do not** punch holes in the scoring overlay
- **do not** make any marks on the answer sheet, other than in the spaces provided for recording scores
- **do not** machine scan the answer sheets. Marking up or scanning these answer sheets will interfere with the score collection.

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 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 answer sheet. Make a careful record to be retained in the school of the total raw score earned by each student. The State Education Department will provide a recordkeeping form for this purpose as part of the detailed directions for administering and scoring the June 2009 Regents Examination in Geometry.

The conversion chart for the Regents Examination in Geometry will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> no later than Rating Day, Thursday, June 25, 2009.

GEOMETRY – *continued*

Part I

Allow a total of 56 credits, 2 credits for each of the following:

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

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.

(29) [2] 20, 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] 20, 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.

(30) [2] A correct construction is drawn showing all appropriate arcs, and the perpendicular line is drawn.

[1] Appropriate work is shown, but one construction error is made, such as not drawing the perpendicular line.

or

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

[0] A drawing that is not an appropriate construction 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.

GEOMETRY – *continued*

(31) [2] $y - 4 = -2(x - 5)$ or an equivalent equation, 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, such as leaving the answer as $\frac{y - 4}{x - 5} = \frac{-2}{1}$, which has a domain restriction.

or

[1] $y - 4 = -2(x - 5)$ or an equivalent equation, 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] Both loci are sketched correctly, and the two points of intersection are labeled with an X.

[1] Both loci are sketched correctly, but the points of intersection are not labeled or are labeled incorrectly.

or

[1] Appropriate work is shown, but one conceptual error is made, but appropriate points of intersection are labeled.

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

GEOMETRY – *continued*

(33) [2] True, and an appropriate justification is written.

[1] True, but the justification is incorrect.

or

[1] One conceptual error is made in evaluating the disjunction, but an appropriate justification is written.

[0] True, but no justification is written.

or

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

(35) [4] 18, and appropriate work is shown, such as $3x + x = 24$.

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

or

[3] $x = 6$, and appropriate work is shown, but \overline{SE} is not found or is found 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.

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

or

[1] 18, 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.

GEOMETRY – *continued*

(36) [4] $15 + 5\sqrt{5}$, and appropriate work is shown.

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

or

[3] Appropriate work is shown, but the perimeter is not expressed in simplest radical form.

or

[3] Appropriate work is shown to find the length of all three sides, but the perimeter is not found.

[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] Appropriate work is shown to find the lengths of two sides, but no further correct work is shown.

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

or

[1] Appropriate work is shown to find the length of one side, but no further correct work is shown.

or

[1] $15 + 5\sqrt{5}$, 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.

GEOMETRY – *continued*

(37) [4] $A''(0,-1)$, $B''(-5,2)$, $C''(-6,-1)$, and $D''(-1,-4)$, and appropriate work is shown.

[3] The composite transformation is graphed and labeled correctly, but the coordinates are not stated or are stated incorrectly.

or

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

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

or

[2] Appropriate work is shown, but one conceptual error is made, such as performing the reflection before the translation.

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

or

[1] $A''(0,-1)$, $B''(-5,2)$, $C''(-6,-1)$, and $D''(-1,-4)$, but no work is shown.

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

Part IV

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

(38) [6] A complete and correct proof that includes a concluding statement is written.

[5] A proof is written that demonstrates a thorough understanding of the method of proof and contains no conceptual errors, but one statement or reason is missing or incorrect, or no concluding statement is written.

or

[5] $\angle A \cong \angle E$ or $\angle B \cong \angle D$ is proven, but no further correct work is shown.

[4] A proof is written that demonstrates a good understanding of the method of proof and contains no conceptual errors, but two statements or reasons are missing or incorrect.

or

[4] $\triangle ABC \cong \triangle EDC$ is proven, but no further correct work is shown.

[3] A proof is written that demonstrates a good understanding of the method of proof, but one conceptual error is made.

[2] Some correct relevant statements about the proof are made, but three or four statements or reasons are missing or incorrect.

[1] Only one correct statement and reason are written.

[0] The given and/or the prove statements are rewritten in the style of a formal proof, but no further correct relevant statements are written.

or

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

Map to Core Curriculum

Content Band	Item Numbers
Geometric Relationships	4, 18, 21, 28
Constructions	25, 30
Locus	12, 32
Informal and Formal Proofs	1, 2, 6, 9, 11, 13, 14, 15, 16, 17, 24, 27, 29, 33, 34, 35, 38
Transformational Geometry	3, 5, 8, 37
Coordinate Geometry	7, 10, 19, 20, 22, 23, 26, 31, 36

Regents Examination in Geometry

June 2009

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

The Chart for Determining the Final Examination Score for the June 2009 Regents Examination in Geometry will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Thursday, June 25, 2009.

Online Submission of Teacher Evaluations of the Test to the Department

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

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