

# MATHEMATICS SCORING TRAINING OVERVIEW FOR ADMINISTRATORS

#### During this Webinar

- Training Resources on e2math.weebly.com
- Overview of the basic information every 3-8 math teacher needs to



#### Resources

#### e2math.weebly.com



Fluency

Deep Understanding

Contact Information

Presentation Materials



#### 2012-2013 Mathematics Scoring Training

The following resources are designed to give teachers an understanding of what has changed in the mathematics assessment and what will remain the same.

During Regional Scoring we will go through the scoring policies and the rubrics, but we will focus our training time on seeing how those documents relate to the guide papers for the operational test to ensure that teachers are applying that information to accurately score the practice papers. Providing this training information in advance will let teachers have the opportunity to digest the changes and ask big-picture/philosophical questions before the day of scoring. We have a big job ahead of us, and we want our day to run as efficiently as possible.

We have broken the training into 3 Steps. In order to maximize the amount of teachers we reach with this information it has been prepared to be distributed 3-different ways. You will find the files and videos referenced in the graphic organizers futher down on the page.



#### Step 1: Understanding What Has Changed and What Has Stayed the Same

Resources You will need the "Turnkey Math Rubrics and Scoring Policies" Document

turnkey math rubrics and scoring policies 2013.pdf

The page will be listed underneath the Home Page

> Scroll down on the page to see the training resources

# Step 1- Understand What Has Changed and What Will Remain the Same



#### Step 1: Understanding What Has Changed and What Has Stayed the Same

#### Resources

You will need the "Turnkey Math Rubrics and Scoring Policies" Document



turnkey\_math\_rubrics\_and\_scoring\_policies\_2013.pdf Download File

#### Scoring Training Webinars (Option 1)

Click on the date for the Wincap Web registration link for the Adobe Connect Webinar. (3:30 to 5:30 pm) March 11 March 18 March 21

#### Scoring Training Videos on YouTube (Option 2)

Video 1- 6th Shifts (4:37) Video 2- Holistic Scoring and the Test Development Process (5:38) Video 3- Mathematics Scoring Policies (7:33) Video 4- Two Point Rubric (4:52)

Video 9- Three Point Rubric (4:53)

#### Scoring Training Powerpoints with Notes (Option 3)

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mathscoring\_part1\_shifts\_2013.pptx Download File



mathscoring\_part2\_holistic\_2013.pptx Download File

#### Step 2: Practice Scoring

#### Step 2:

#### Practice Scoring

We have been scoring student work holistically so this type of thinking isn't new. However, it is helpful to see how the rubrics and scoring policies work. This is an "at your own pace" section so you can take the time you need without being rushed or slowed down by other participants.

#### Review the Rubric and Scoring Polices

Read a set of guide papers that define responses at each level of the rubric.

Score the practice papers for your question using the guide papers, rubric, and scoring policies.

Use the Powerpoint for your question set to check your responses, or you can listen to the recorded discussion of the questions on YouTube.

## For the two point rubric there is a 6th and 8th grade sample

For the three point rubric there is a 4th and 6th grade sample

These may not be the grades you will score but the process of using the guide papers, rubrics, and scoring policies is the same for all grades

#### Step 2: Practice Scoring

#### Step 2: Practice Scoring Resources for the Two-Point Rubric

Score the following examples using the two-point rubric and the mathematics scoring policies



6th\_grade\_2\_point\_sample\_question\_guide-practice.pdf Download File



8th\_grade\_2\_point\_sample\_question\_guide-practice.pdf Download File

#### Practice Using the Two-Point Rubric

Check your work using the corresponding videos or powerpoint slides Video 5- 6th Grade Sample Question Guide Papers (7:17)



mathscoring\_part5\_2ptguide\_6th2013.pptx Download File

Video 6- 6th Grade Sample Question Practice Papers



Click here to upload file

#### Step 3: Question and Answer (Optional)

#### Step 3:

Question and Answer Sessions

Optional webinars will be offered on March 14, March 20, and March 26

Please complete Steps 1 & 2 before attending one of these webinars. This is an opportunity to to seek further clarification by asking questions that were not answered through the training materials. If you have big-picture questions, philosophical questions, or just questions that will help you feel more comfortable about the process of scoring, please take advantage of the opportunity to ask them before the day of scoring.

We want to direct all of our energy at Regional Scoring towards scoring the students' papers fairly and accurately.

#### Step 3: Question and Answer Webinar

Click on the date for the Wincap Web registration link for the optional Adobe Connect Webinars. (3:30 to 5:30 pm) March 14 March 20 March 26

# Video 1: Instructional Shifts



New York State 2013 Grades 3-8 Common Core Mathematics Rubric and Scoring Turnkey Training

# Introduction













When we compare the tests from the past with the present, we see that:

- Questions from previous tests were simpler, one or two steps, or were heavily scaffolded. The new questions will requires multiple steps involving the interpretation of operations.
- Questions from the past were heavy on pure fluency in isolation. The new questions require conceptual understanding and fluency in order to complete test questions.
- Questions from past tests isolated the math. The new problems are in a real world problem context.
- Questions of old relied more on the rote use of a standard algorithm for finding answers to problems. The new questions require students to do things like decompose numbers and/or shapes, apply properties of numbers, and with the information given in the problem reach an answer. Relying solely on algorithms will not be sufficient.

# Holistic Scoring



### Holistic Scoring

- Holistic scoring assigns a single, overall test score for a response as a whole.
- The single score reflects the level of understanding the student demonstrates in the response.
- To score holistically, you must look at the entire response, rather than evaluating the parts or individual attributes separately.
- A response may have some attributes of adjacent score points, but you must assign the score that best describes the response as a whole – the "best fit" score.

When scoring holistically:

- Read thoroughly to assess the level of understanding demonstrated.
- Assign the score that best reflects the level of understanding the response demonstrates.
- Keep in mind that some errors may detract from the level of understanding demonstrated and other errors may not detract.
- Compare each response to the rubric and training papers.

Scoring a state test is quite different from grading classroom papers.

- Scoring
  - A response is assessed based on the demonstrated level of understanding and how it compares to the rubric and training papers.
- Grading
  - Individual errors are totaled to determine the grade assigned.

### Scoring versus Grading (Continued)

- Remember: You are scoring, not grading.
- Set aside your own grading practices while scoring.
- Determine scores based only on the work in the student booklet, using state standards—not classroom standards—to score responses accurately, fairly, and consistently.

### **Guarding Against Scoring Biases**

#### Appearance of response

• The quality of the handwriting, the use of cursive or printing, margins, editing marks, cross-outs, and overall neatness are not part of the scoring criteria.

The quick red for jumped over the lazy brown dog.

#### **Response Length**

- Many factors can contribute to how long or short a response appears to be, including size and style of the handwriting, spacing, or placement on the page.
- As you score, follow the standards of the guide papers and rubric rather than being influenced by the length of the response.
- If the response fulfills the requirements defined by the guide for a specific score point, it should receive that score.

### Guarding Against Scoring Biases (Continued)

#### **Response Organization**

 Some responses will seem haphazardly or illogically organized. For many of these responses, however, the necessary work is present and can be followed. Your responsibility is to carefully examine such responses to determine whether the necessary steps and information are included.

#### Alternate Approaches

 Students may use unique or unusual-yet acceptable-methods to solve mathematical problems. They may use methods not covered in training materials or not familiar to you as a scorer. Be sure to objectively evaluate all approaches based on the scoring standards, and ask your table leader if you have questions.

# Scoring Policies





University of the State of New York State Education Department

#### New York State Testing Program Mathematics Test

2013 Turnkey Training

Rubrics, Scoring Policies and Practice Score Sheet

\*These are the same rubrics and scoring policies that were released earlier this year through the <u>3-8 NYS Testing Guides</u> on EngageNY

### 2- and 3-point Mathematics Scoring Policies (pg. 2)

Below are the policies to be followed while scoring the mathematics tests for all grades:

- 1. If a student does the work in other than a designated "Show your work" area, that work should still be scored. (Additional paper is an allowable accommodation for a student with disabilities if indicated on the student's Individualized Education Program or Section 504 Accommodation Plan.)
- 2. If the question requires students to show their work, and the student shows appropriate work and clearly identifies a correct answer but fails to write that answer in the answer blank, the student should still receive full credit.
- 3. If the question requires students to show their work, and the student shows appropriate work and arrives at the correct answer but writes an incorrect answer in the answer blank, the student should **not** receive full credit.
- 4. In questions that provide ruled lines for students to write an explanation of their work, mathematical work shown elsewhere on the page should be considered and scored.
- 5. If the student provides one legible response (and one response only), teachers should score the response, even if it has been crossed out.

### 2- and 3-point Mathematics Scoring Policies (Continued)

- 6. If the student has written more than one response but has crossed some out, teachers should score only the response that has **not** been crossed out.
- 7. Trial-and-error responses are **not** subject to Scoring Policy #6 above, since crossing out is part of the trial-and-error process.
- 8. If a response shows repeated occurrences of the same conceptual error within a question, the student should **not** be penalized more than once.
- 9. In questions that require students to provide bar graphs:
  - In Grades 3 and 4 only, touching bars are acceptable.
  - In Grades 3 and 4 only, space between bars does not need to be uniform.
  - In all grades, widths of the bars must be consistent.
  - In all grades, bars must be aligned with their labels.
  - In all grades, scales must begin at zero (0), but the 0 does not need to be written.

### 2- and 3-point Mathematics Scoring Policies (Continued)

- 10. In questions requiring number sentences, the number sentences must be written horizontally.
- 11. In pictographs, the student is permitted to use a symbol other than the one in the key, provided that the symbol is used consistently in the pictograph; the student does not need to change the symbol in the key. The student may **not**, however, use multiple symbols within the chart, nor may the student change the value of the symbol in the key.
- 12. If students are not directed to show work, any work shown will not be scored. This applies to items that do not ask for any work and items that ask for work for one part and do not ask for work in another part.

#### NEW YORK STATE EDUCATION DEPARTMENT TEST DEVELOPMENT PROCESS





University of the State of New York State Education Department

#### New York State Testing Program Mathematics Test

2013 Turnkey Training

Rubrics, Scoring Policies and Practice Score Sheet

### Mathematics 2-point Holistic Rubric (pg. 1)

Score Point	Description
2 Points	<ul> <li>A two-point response answers the question correctly.</li> <li>This response <ul> <li>demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the demonstration of understanding</li> <li>indicates that the student has completed the task correctly, using mathematically sound procedures</li> </ul> </li> </ul>
1 Point	<ul> <li>A one-point response is only partially correct.</li> <li>This response <ul> <li>indicates that the student has demonstrated only a partial understanding of the mathematical concepts and/or procedures in the task</li> <li>correctly addresses some elements of the task</li> <li>may contain an incorrect solution but applies a mathematically appropriate process</li> <li>may contain correct numerical answer(s) but required work is not provided</li> </ul> </li> </ul>
0 Points	A zero-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point	Description
2 Points	A two-point response answers the question correctly.
	This response
	<ul> <li>demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the demonstration of</li> </ul>
	understanding
	<ul> <li>indicates that the student has completed the task correctly, using mathematically sound procedures</li> </ul>

Score Point	Description
2 Points	A two-point response answers the question <b>correctly</b> .
	This response
	<ul> <li>demonstrates a thorough understanding of the</li> </ul>
	mathematical concepts but may contain errors
	that do not detract from the demonstration of
	understanding
	<ul> <li>indicates that the student has completed the task</li> </ul>
	correctly, using mathematically sound procedures

#### Grade 6 Short-response Practice Paper 5

**Score Point 2** 



#### Grade 4 Extended-response Practice Paper 4



Candy wants to buy herself a new bicycle that costs \$240. Candy has already saved \$32, but she needs to make a plan so she can save the rest of the money she needs. She decides to save the same amount of money, *x* dollars, each month for the next four months.

Write an equation that helps Candy determine the amount of money she must save each month.

\$240-\$32=D()8+K=X

Solve the equation to find the amount of money she must save each month to meet her goal of buying a bicycle.

Show your work.

Answer \$

#### Grade 6 Short-response Guide Paper 3

54 + 36 = 63 + 16 =What is the value of  $26^{+} + 36^{-} - 34^{-} - 5x$  when x = 3?Show your work. Answer Ner  $10^{-10}$   $3x^{9x^{3}}_{3x^{3}} = 27$   $\frac{47}{27}_{x^{2}}_{x^{2}}$   $2x^{27}_{7} = \frac{54}{54}_{-1}_{-18}_{-18}$   $\frac{7}{8}6^{0}_{7} = \frac{7}{3}x^{3}_{7} = 9$   $3x^{9}_{7} = 27 \frac{27}{63^{13}}_{63^{13}}_{3x^{3}} = 9$   $6x^{3}_{7} = 18$  -18  $\frac{-18}{45}$ tib D  $2 \times [3 \times 3 \times 3] = \frac{127}{54}$   $\frac{2 \times 27}{54}$   $\frac{36}{948} = \frac{18}{54}$   $\frac{36}{948} = \frac{18}{54}$   $\frac{18}{54} = \frac{18}{54}$ 6×3 18

Score Point	Description
1 Point	A one-point response is only partially correct.
	This response
	<ul> <li>indicates that the student has demonstrated only a partial understanding of the mathematical concepts and/or procedures in the task</li> </ul>
	<ul> <li>correctly addresses some elements of the task</li> </ul>
	<ul> <li>may contain an incorrect solution but applies a mathematically appropriate process</li> </ul>
	<ul> <li>may contain correct numerical answer(s) but required work is not provided</li> </ul>

Score Point	Description
0 Points	A zero-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.



University of the State of New York State Education Department

#### New York State Testing Program Mathematics Test

2013 Turnkey Training

Rubrics, Scoring Policies and Practice Score Sheet

#### Mathematics 3-point Holistic Rubric

Score Point	Description
3 Points	A three-point response answers the question correctly.
	<ul> <li>This response</li> <li>demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the demonstration of understanding</li> <li>indicates that the student has completed the task correctly, using mathematically sound procedures</li> </ul>
2 Points	A two-point response is partially correct.
	<ul> <li>This response</li> <li>demonstrates partial understanding of the mathematical concepts and/or procedures embodied in the task</li> <li>addresses most aspects of the task, using mathematically sound procedures</li> <li>may contain an incorrect solution but provides complete procedures, reasoning, and/or explanations</li> <li>may reflect some misunderstanding of the underlying mathematical concepts and/or procedures</li> </ul>
1 Point	A one-point response is incomplete and exhibits many flaws but is not completely incorrect.
	This response
	<ul> <li>demonstrates only a limited understanding of the mathematical concepts and/or procedures embodied in the task</li> <li>may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete</li> <li>exhibits multiple flaws related to misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning</li> <li>reflects a lack of essential understanding of the underlying mathematical concepts</li> <li>may contain correct numerical answer(s) but required work is not provided</li> </ul>
0 Points	A zero-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived at using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.

Score Point	Description
3 Points	A three-point response answers the question correctly.
	<ul> <li>This response</li> <li>demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the demonstration of understanding</li> <li>indicates that the student has completed the task correctly, using mathematically sound procedures</li> </ul>

Score Point	Description
Highest	A three-point response answers the question correctly.
score on the	This response
3 point	<ul> <li>demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the</li> </ul>
rubric	demonstration of understanding
	<ul> <li>indicates that the student has completed the task correctly, using mathematically cound procedures</li> </ul>
	mathematically sound procedures

Score Point	Description
Highest	A two-point response answers the question correctly.
score on	
the	This response
2-point rubric	<ul> <li>demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the demonstration of understanding</li> <li>indicates that the student has completed the task correctly, using mathematically sound procedures</li> </ul>

Score Point	Description
2 Points	A two-point response is partially correct.
	<ul> <li>This response</li> <li>demonstrates partial understanding of the mathematical concepts and/or procedures embodied in the task</li> <li>addresses most aspects of the task, using mathematically sound procedures</li> <li>may contain an incorrect solution but provides complete procedures, reasoning, and/or explanations</li> <li>may reflect some misunderstanding of the underlying mathematical concepts and/or procedures</li> </ul>

Score Point	Description
1 Point	A one-point response is incomplete and exhibits many flaws but is not completely incorrect.
	This response
	<ul> <li>demonstrates only a limited understanding of the mathematical concepts and/or procedures embodied in the task</li> <li>may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete</li> <li>exhibits multiple flaws related to misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical</li> </ul>
	<ul> <li>reasoning</li> <li>reflects a lack of essential understanding of the underlying mathematical concepts</li> </ul>
	<ul> <li>may contain correct numerical answer(s) but required work is not provided</li> </ul>

Score Point	Description
0 Points	A zero-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived at using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.