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ELEMENTARY AND SECONDARY
EDUCATION

*Release of
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MCAS Retest
Information*

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I. Document Purpose and Structure

Document Purpose and Structure

Purpose

The purpose of this document is to share with educators and the public information regarding the March 2016 MCAS English Language Arts (ELA) and Mathematics retests, including the reporting category and standard associated with each item. Beginning in 2013, the Department no longer releases the items from the March retests. The decision to withhold the items from the March retests assists the Department in producing high-quality retests in future years. All items continue to be released for the spring grade 10 tests and the November retests in ELA and Mathematics.

Structure

Chapters II and III of this document contain, respectively, information for the March 2016 ELA and Mathematics retests. Each of these chapters has two sections.

The **first section** lists the Massachusetts curriculum framework learning standards assessed by MCAS in that chapter's content area, as well as the MCAS reporting categories under which retest results are reported to schools and districts. The first section also provides the Web address for the relevant framework. In addition, there is a brief overview of the retest (number of test sessions, types of items, reference materials allowed, and in Chapter III, information about the Spanish-language edition of the Mathematics retest). The Mathematics Reference Sheet used by students during MCAS Mathematics test sessions appears at the end of the first section of the Mathematics chapter.

The **second section** of each chapter is a table that cross-references each item with its MCAS reporting category and with the *Framework* standard it assesses. The table shows how the items on the test assess standards in both the 2011 frameworks and the previous frameworks. More information about the transition of MCAS to the standards in the 2011 frameworks is available at www.doe.mass.edu/mcas/transition.

II. English Language Arts Retest

A. Composition

B. Reading Comprehension

English Language Arts Retest

Test Structure

The English Language Arts retest was presented in the following two parts:

- the ELA Composition retest, which used a writing prompt to assess learning standards from the **Writing** strand in the *Massachusetts Curriculum Framework for English Language Arts and Literacy* (March 2011)
- the ELA Reading Comprehension retest, which used multiple-choice and open-response questions (items) to assess learning standards from the **Reading** and **Language** strands in the *Massachusetts Curriculum Framework for English Language Arts and Literacy*

A. Composition

The 2016 ELA Composition retest was based on learning standards in the grades 6–12 **Writing** strand of the *Massachusetts Curriculum Framework for English Language Arts and Literacy* (March 2011). The learning standards for the grades 6–12 **Writing** strand appear on pages 53–59 of the *Framework*, which is available on the Department website at www.doe.mass.edu/frameworks/current.html.

Each grade 10 ELA writing prompt requires students to write a literary analysis (coded to standard 1 in the grades 6–12 **Writing** strand in the 2011 *Framework*). All grade 10 writing prompts also assess standards 4 and 5 in the grades 6–12 **Writing** strand.

ELA Composition retest results are reported under the reporting categories **Composition: Topic Development** and **Composition: Standard English Conventions**.

Test Sessions and Content Overview

The ELA Composition retest included two separate test sessions, administered on the same day with a short break between sessions. During the first session, each student wrote an initial draft of a composition in response to the writing prompt. During the second session, each student revised his or her draft and submitted a final composition, which was scored in the areas of Topic Development and Standard English Conventions. The Scoring Guides for the MCAS English Language Arts Composition are available at www.doe.mass.edu/mcas/student/elacomp_scoreguide.html.

Reference Materials

At least one English-language dictionary per classroom was provided for student use during ELA Composition retest sessions. The use of bilingual word-to-word dictionaries was allowed for current and former English language learner (ELL) students only. No other reference materials were allowed during either ELA Composition retest session.

B. Reading Comprehension

The English Language Arts Reading Comprehension retest was based on grades 6–12 learning standards in the content strands of the *Massachusetts Curriculum Framework for English Language Arts and Literacy* (March 2011) listed below. Page numbers for the learning standards appear in parentheses.

■ Reading (*Framework*, pages 47–52)

■ Language (*Framework*, pages 64–67)

The *Massachusetts Curriculum Framework for English Language Arts and Literacy* is available on the Department website at www.doe.mass.edu/frameworks/current.html.

ELA Reading Comprehension retest results are reported under two MCAS reporting categories, **Reading** and **Language**, which are identical to the two framework content strands listed above.

The table on the next page indicates each item’s reporting category and both the 2011 grades 6–12 *Framework* standard and the 2001 *Framework* general standard it assesses.

Test Sessions and Content Overview

The ELA Reading Comprehension retest included three separate test sessions. Sessions 1 and 2 were both administered on the same day, and Session 3 was administered on the following day. Each session included reading passages, followed by multiple-choice and open-response questions.

Reference Materials

During all three ELA Reading Comprehension sessions, the use of bilingual word-to-word dictionaries was allowed for current and former ELL students only. No other reference materials were allowed during any ELA Reading Comprehension retest session.

**English Language Arts
Reading Comprehension Retest
March 2016 Items:
Reporting Categories and Standards**

Item No.	Reporting Category¹	Standard¹	2001 Standard²
1	<i>Reading</i>	7	13
2	<i>Reading</i>	4	15
3	<i>Reading</i>	5	13
4	<i>Reading</i>	1	13
5	<i>Reading</i>	1	13
6	<i>Reading</i>	5	13
7	<i>Reading</i>	2	13
8	<i>Language</i>	4	4
9	<i>Reading</i>	2	13
10	<i>Reading</i>	3	14
11	<i>Reading</i>	1	14
12	<i>Reading</i>	6	14
13	<i>Language</i>	5	4
14	<i>Reading</i>	3	12
15	<i>Reading</i>	3	12
16	<i>Reading</i>	3	12
17	<i>Reading</i>	2	12
18	<i>Reading</i>	3	12
19	<i>Reading</i>	2	12
20	<i>Reading</i>	4	15
21	<i>Language</i>	4	4
22	<i>Reading</i>	3	12
23	<i>Reading</i>	1	17
24	<i>Reading</i>	4	17
25	<i>Reading</i>	2	11
26	<i>Reading</i>	3	17
27	<i>Reading</i>	3	17
28	<i>Reading</i>	6	13
29	<i>Reading</i>	6	13
30	<i>Reading</i>	1	13
31	<i>Reading</i>	2	13
32	<i>Reading</i>	1	13
33	<i>Reading</i>	5	13
34	<i>Language</i>	4	4
35	<i>Language</i>	5	4
36	<i>Reading</i>	6	13
37	<i>Reading</i>	5	15
38	<i>Reading</i>	3	16
39	<i>Reading</i>	5	15
40	<i>Reading</i>	2	16

¹ The Reporting Category and Standard columns refer to the current (2011) *Massachusetts Curriculum Framework for English Language Arts and Literacy*. More information about reporting categories for ELA is available at www.doe.mass.edu/mcas/tdd/ela.html?section=testdesign.

² The Department is providing the standard from the previous (2001) curriculum framework for ELA for reference purposes.

III. Mathematics Retest

Mathematics Retest

The Mathematics retest was based on standards in the 2011 *Massachusetts Curriculum Framework for Mathematics* that match content in the grades 9–10 standards from the 2000 *Massachusetts Mathematics Curriculum Framework*. The standards in the 2011 *Framework* on the retest are organized under the five major conceptual categories listed below.

- Number and Quantity
- Algebra
- Functions
- Geometry
- Statistics and Probability

The 2011 *Curriculum Framework for Mathematics* is available on the Department website at www.doe.mass.edu/frameworks/current.html. More information and a list of standards assessable on the Mathematics retest are available at www.doe.mass.edu/mcas/transition/2013-14g10math.html.

Mathematics retest results are reported under four MCAS reporting categories, which are based on the five *Framework* conceptual categories listed above.

The table at the conclusion of this chapter indicates each item’s reporting category, the 2011 *Framework* standard it assesses, and the 2000 *Framework* standard it assesses.

Test Sessions

The Mathematics retest included two separate test sessions, which were administered on consecutive days. Each session included multiple-choice and open-response items. Session 1 also included short-answer items.

Spanish-Language Edition

Since approximately 55% of ELL students in Massachusetts public schools are native Spanish speakers, a Spanish-language edition of the March 2016 Mathematics retest was made available to eligible Spanish-speaking students. Student test booklets for the Spanish-language edition of the retest were issued in side-by-side English/Spanish format: pages on the left side of each booklet presented items in Spanish; pages on the right side presented the same items in English.

Reference Materials and Tools

Each student taking the Mathematics retest was provided with a grade 10 Mathematics Reference Sheet. A copy of the reference sheet appears on the following page.

During Session 2, each student had sole access to a calculator with at least four functions and a square root key. Calculator use was not allowed during Session 1.

During both Mathematics retest sessions, the use of bilingual word-to-word dictionaries was allowed for current and former ELL students only. No other reference tools or materials were allowed.

AREA FORMULAS

- square $A = s^2$
- rectangle $A = bh$
- parallelogram $A = bh$
- triangle $A = \frac{1}{2}bh$
- trapezoid $A = \frac{1}{2}h(b_1 + b_2)$
- circle $A = \pi r^2$

LATERAL SURFACE AREA FORMULAS

- right rectangular prism $LA = 2(hw) + 2(lh)$
- right circular cylinder $LA = 2\pi rh$
- right circular cone $LA = \pi r\ell$
(ℓ = slant height)
- right square pyramid $LA = 2s\ell$
(ℓ = slant height)

TOTAL SURFACE AREA FORMULAS

- cube $SA = 6s^2$
- right rectangular prism $SA = 2(lw) + 2(hw) + 2(lh)$
- sphere $SA = 4\pi r^2$
- right circular cylinder $SA = 2\pi r^2 + 2\pi rh$
- right circular cone $SA = \pi r^2 + \pi r\ell$
(ℓ = slant height)
- right square pyramid $SA = s^2 + 2s\ell$
(ℓ = slant height)

VOLUME FORMULAS

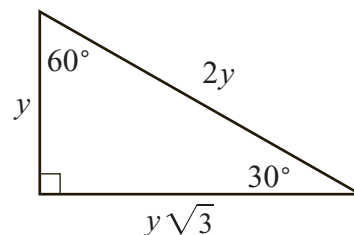
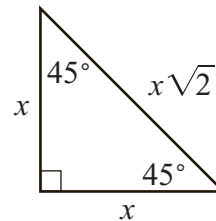
- cube $V = s^3$
(s = length of an edge)
- right rectangular prism $V = lwh$

OR
 $V = Bh$
(B = area of a base)
- sphere $V = \frac{4}{3}\pi r^3$
- right circular cylinder $V = \pi r^2h$
- right circular cone $V = \frac{1}{3}\pi r^2h$
- right square pyramid $V = \frac{1}{3}s^2h$

CIRCLE FORMULAS

- $C = 2\pi r$
- $A = \pi r^2$

SPECIAL RIGHT TRIANGLES



Mathematics Retest
March 2016 Items:
Reporting Categories and Standards

Item No.	Reporting Category ¹	Standard ¹	2000 Standard ²
1	<i>Number and Quantity</i>	7.EE.3	10.N.1
2	<i>Number and Quantity</i>	8.NS.2	10.N.3
3	<i>Geometry</i>	G-GMD.3	10.M.2
4	<i>Algebra and Functions</i>	A-REI.3	10.P.6
5	<i>Number and Quantity</i>	7.EE.3	10.N.4
6	<i>Geometry</i>	7.G.6	10.M.1
7	<i>Number and Quantity</i>	8.EE.1	10.P.4
8	<i>Algebra and Functions</i>	8.F.4	10.P.2
9	<i>Number and Quantity</i>	8.NS.2	10.N.3
10	<i>Number and Quantity</i>	7.NS.3	10.N.2
11	<i>Geometry</i>	8.G.5	10.G.3
12	<i>Number and Quantity</i>	7.EE.3	10.N.1
13	<i>Algebra and Functions</i>	A-REI.4	10.P.5
14	<i>Number and Quantity</i>	7.EE.3	10.N.4
15	<i>Algebra and Functions</i>	F-BF.2	10.P.1
16	<i>Statistics and Probability</i>	S-ID.1	10.D.1
17	<i>Algebra and Functions</i>	F-IF.4	10.P.7
18	<i>Geometry</i>	7.G.6	10.M.2
19	<i>Geometry</i>	G-CO.2	10.G.9
20	<i>Number and Quantity</i>	7.EE.3	10.N.2
21	<i>Statistics and Probability</i>	S-ID.6	10.D.2
22	<i>Algebra and Functions</i>	A-CED.1	10.P.7
23	<i>Geometry</i>	G-GMD.3	10.M.2
24	<i>Geometry</i>	G-SRT.5	10.G.4
25	<i>Geometry</i>	7.G.3	10.G.10
26	<i>Geometry</i>	G-SRT.8	10.G.5
27	<i>Algebra and Functions</i>	A-CED.1	10.P.7
28	<i>Geometry</i>	8.G.5	10.G.6
29	<i>Geometry</i>	G-GMD.3	10.M.3
30	<i>Geometry</i>	G-C.2	10.G.3
31	<i>Statistics and Probability</i>	S-ID.1	10.D.1
32	<i>Number and Quantity</i>	7.EE.3	10.N.1
33	<i>Geometry</i>	G-GPE.7	10.G.7
34	<i>Statistics and Probability</i>	S-ID.1	10.D.1
35	<i>Algebra and Functions</i>	A-REI.4	10.P.7
36	<i>Statistics and Probability</i>	6.SP.4	10.D.1
37	<i>Algebra and Functions</i>	8.F.4	10.P.2
38	<i>Statistics and Probability</i>	6.SP.5	10.D.1
39	<i>Geometry</i>	8.G.2	10.G.1
40	<i>Algebra and Functions</i>	A-REI.6	10.P.8
41	<i>Algebra and Functions</i>	F-BF.2	10.P.1
42	<i>Geometry</i>	G-GMD.3	10.M.2

¹ The Reporting Category and Standard columns refer to the current (2011) *Massachusetts Curriculum Framework for Mathematics*. More information about reporting categories for Mathematics is available on the Department's website at www.doe.mass.edu/mcas/tdd/math.html?section=testdesign.

² The Department is providing the standard from the previous (2000) curriculum framework for Mathematics for reference purposes.