

Mathematics Assessment Updates for 2011



Measurements of Student Progress Grades 6-8

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Introduction

Updates for 2011 contains pertinent information for Washington educators. This document includes a summary of changes and new information in mathematics assessment, links to resources for teachers, and sample test items from *Changes for 2010 and Beyond*. *Updates for 2011* has been customized into grade bands: Grades 3-5, Grades 6-8, and End-of-Course Assessments. The documents are available on <http://www.k12.wa.us/Mathematics/default.aspx>.

Washington State K-12 Mathematics Learning Standards

In 2008, the State Board of Education voted to approve the revised K-8 Mathematics Learning Standards and 9-12 Mathematics Learning Standards for adoption by the Office of Superintendent of Public Instruction (OSPI). Along with the new standards, the legislature provided direction for the redesign of the assessment system. The Measurements of Student Progress (MSP) replaced the Washington Assessment of Student Learning (WASL) and assessed the new mathematics standards in grades 3-8 in the spring of 2010. End-of-course (EOC) exams will replace the High School Proficiency Exam (HSPE) in 2011. These EOC exams will assess the Algebra 1/Integrated Mathematics 1 and Geometry/Integrated Mathematics 2 performance expectations in the spring of 2011.

Overview of the Standards

The *Washington State K-12 Mathematics Learning Standards* outline the mathematics learning expectations for all students in Washington. These standards describe the mathematics content, procedures, applications, and processes that students are expected to learn. The topics and mathematical strands represented across grades K-12 constitute a mathematically complete program that includes the study of numbers, operations, geometry, measurement, algebra, data analysis, probability and important mathematical processes.

The *Washington State K-12 Mathematics Learning Standards* are organized by grade level for grades K-8 and by course for Algebra 1, Integrated Mathematics 1, Geometry, and Integrated Mathematics 2. Each grade/course consists of three elements: *Core Content*, *Additional Key Content*, and *Core Processes*. These elements are referred to as Areas of Emphasis in the Test and Item Specifications. *Core Content* areas describe the major mathematical focuses of each grade level or course. *Additional Key Content* contains important expectations that do not warrant the same amount of instructional time as the Core content areas. *Core Process* includes expectations that address reasoning, problem solving, and communication. At the beginning of each of these elements is an introductory paragraph that conveys the essence of the content in a way that should help readers get a clear “sense” of that content.

View the new Washington State K-12 Mathematics Learning Standards at:

<http://www.k12.wa.us/Mathematics/Standards.aspx>

Test and Item Specifications

The Test and Item Specifications provide guidelines for developing large-scale assessments based on the Washington State K-12 Mathematics Learning Standards that assess the levels of proficiency students have achieved.

The test specifications provide a grade-level or course test map that delineates the type and number of test items in each Area of Emphasis.

The item specifications assist in writing test items that align with the mathematics performance expectations and follow associated restrictions. Restrictions are necessary to construct a valid and reliable statewide on-demand assessment. These restrictions are **not** necessary in classroom-based assessments. Restrictions in items written for the Measurements of Student Progress (MSP) and End-Of-Course exams follow guidelines provided in the Washington K-12 Mathematics Learning Standards. They include limitations and clarifications such as: kinds of numbers, types of geometric figures, types of data displays, etc.

The Test and Item Specifications are periodically updated to:

- clarify performance expectations (e.g. rules, limits, item format);
- incorporate additions/changes recommended as a result of the work of committees convened for the development of items (e.g. Item Writing, Range Finding, Content Review, and Content Review with Data);
- meet new legislative requirements; and
- answer questions from the field.

Included with each updated version of the Test and Item Specifications will be a summary of the changes made since the previous version.

The Test and Item Specifications can be accessed through the following link:

<http://www.k12.wa.us/Mathematics/TestItemSpec.aspx>.

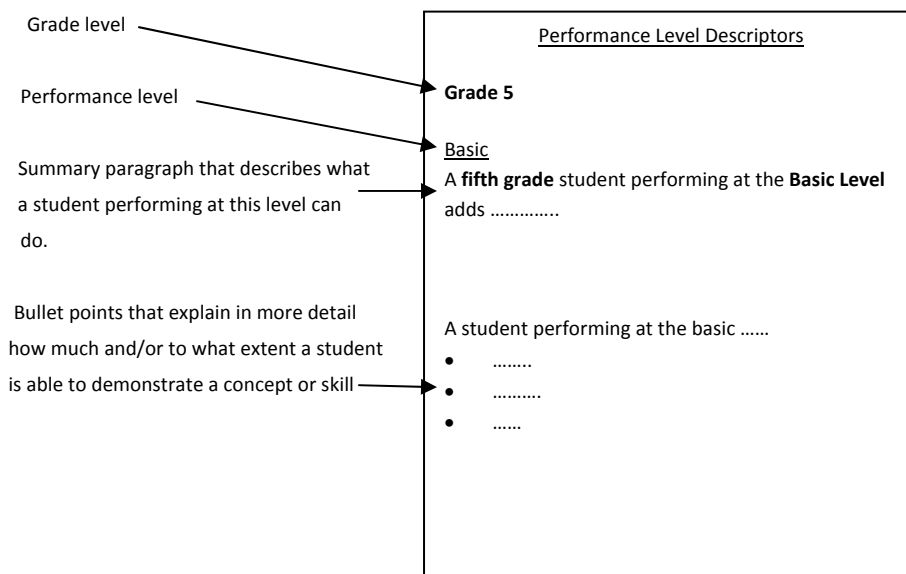
Performance Level Descriptors

Washington State reports four levels of performance on the Measurements of Student Progress: Below Basic, Basic, Proficient, and Advanced. Performance level descriptors (PLDs) describe what a student must be able to do to reach the Basic, Proficient, and Advanced levels at each grade or course.

The PLDs were developed by grade-level teams of educators from all regions of the state with experience in teaching mathematics to students of diverse ethnic and socio-economic backgrounds. These PLDs were used and revised by the standard setting panels when cut scores were established for grades 3-8 in July/August 2010. PLDs for end-of-course (EOC) exams will be developed in the 2010-2011 school year and will be used by the Standard Setting Panels when establishing cut scores for EOC exams and EOC makeup exams in August 2011.

Teachers have reported that the PLDs are useful when communicating with parents and students. The specific bullet points described in the Performance Level Descriptors can also be used by teachers as learning checkpoints.

Sample Performance Level Descriptor



Access the Performance Level Descriptors for grades 3-8 at:

<http://www.k12.wa.us/assessment/statetesting/PLD/default.aspx>.

Performance Level Descriptors for Algebra 1/Integrated Mathematics 1 and Geometry/Integrated Mathematics 2 will be available in Fall 2011 after Standard Setting.

Calculator Use and Restrictions Policy

For grades 7-12 on the Measurements of Student Progress (MSP), End-of-Course (EOC) Assessments, and EOC Makeup Assessments

A scientific calculator is sufficient for all items on the Grade 7 and 8 Measurements of Student Progress (MSP) and all end-of-course (EOC) mathematics assessments. Students need access to the following calculator functions:

- Exponents
- Square root
- Cube root (for all EOC exams)
- Trigonometric functions (for Geometry/Integrated Mathematics 2 and Makeup Year 2)

A Calculator Use and Restrictions Policy for students in grades 7-12 taking the MSP, EOC exams, and EOC makeup exams is currently under development.

Students in grades 3-6 may not use a calculator on the MSP.

Manipulatives and Tools Allowed on the Measurements of Student Progress (MSP), End-of-Course (EOC) Exams, and EOC Makeup Exams

New content in the K-12 Mathematics Learning Standards has resulted in confusion about which manipulatives are allowed during the state assessments. Use of a variety of manipulatives by teachers during instruction can be beneficial for students to build concrete understanding of mathematical content and procedures. Students are also expected to understand the meaning of symbolic notation, develop fluency, and apply concepts and procedures in problem solving situations. Many performance expectations require students to demonstrate understanding at the symbolic notation, fluency, and application levels. Because of the need to assess these levels of understanding, some manipulatives used in the classroom are not appropriate for use on the state assessments. Of the utmost importance—**manipulatives should not provide answers to items.**

Manipulatives and Tools Allowed	Manipulatives and Tools Not Allowed
<p>Manipulatives that are used during the assessment should not be distributed to the students but should be available in the classroom to students who elect to use them.</p> <ul style="list-style-type: none"> • Straightedge (all grades) • Ruler with centimeters and inches for grade 3 (required) • Protractor or angle ruler for grade 5 (required) • Abacus for visually impaired/blind students using Braille edition • Tiles, algebra tiles, cubes • Base-ten pieces • Pattern blocks, geoboards, Cuisenaire rods • Judy clocks without a digital display • Glossary of Non-Mathematics Terms <p><i>Tools that can remain on teachers' walls:</i></p> <ul style="list-style-type: none"> • Hundreds charts (0-99 or 1-100 only) • Number lines with whole numbers only <p><i>*Tools that must be collected for shredding, if used:</i></p> <ul style="list-style-type: none"> • Graph paper* 	<p>Because of the multitude and variety of materials available, the following list of materials that are <u>not</u> allowed is not exhaustive. Consider all manipulatives “Not Allowed” if they are not listed as “Allowed”.</p> <p>The following list addresses the most commonly asked questions concerning manipulative use from the field.</p> <ul style="list-style-type: none"> • Calculators for grades 3-6 • Multiplication or addition matrices • Number lines with integers, fractions, decimals, or markings of multiples, prime, and/or composite numbers • Commercially- or student-made fraction pieces, fraction templates, or fraction materials, whether labeled or unlabeled • Dictionaries or thesauruses • Patty paper or tracing paper • Dry erase boards • Highlighters

If you have further questions regarding manipulatives contact: Assessment@k12.wa.us.

Mathematics Formula Sheet for Grades 6-8

During the mathematics testing session students are permitted to use this formula sheet as a reference. This sheet may not be used as scratch paper.

Below are formulas you may find useful as you work the items.

Use 3.14 or $\frac{22}{7}$ when calculating with π .

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lge.

Figure	Formula	
Circle	$A = \pi r^2$	A: Area r: radius
	$C = \pi d$ or $C = 2\pi r$	C: Circumference d: diameter r: radius
Cylinder	$SA = 2\pi r^2 + 2\pi rh$	SA: Surface Area r: radius h: height
	$V = \pi r^2 h$	V: Volume r: radius h: height
Cone	$V = \frac{1}{3}Bh$ or $V = \frac{1}{3}\pi r^2 h$	V: Volume r: radius h: height B: area of base
Rectangular Prism	$SA = 2lw + 2lh + 2wh$ or $SA = 2(lw + lh + wh)$	SA: Surface Area l: length w: width h: height
	$V = lwh$	V: Volume l: length w: width h: height
Pyramid	$V = \frac{1}{3}Bh$	V: Volume B: area of base h: height

The Move to Online State Testing

Washington is joining a growing number of states moving to online testing. In May 2010, a little more than 25 percent of students statewide in grades 6-8 participated in online testing. By 2012, the goal is to move the majority of grades and content areas online. Based on feedback from schools who participated in the spring's online testing, OSPI will evaluate the [rollout plan](#) to determine if any adjustments are needed.

Mathematics

Measurements of Student Progress						
	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8
2010	P/P	P/P	P/P	Online	Online	Online
2011	P/P(*)	Online	Online	Online	Online	Online
2012	Online	Online	Online	Online	Online	Online

P/P = Pencil/Paper
 (*) = Research Online

= 25% Online
 = 50% Online
 = 80% Online
 = 100% Online

Fourth and fifth grade participation are included in to the 2011 testing schedule. OSPI is conducting feasibility studies for online testing in third grade. For now, third grade will remain a paper-and-pencil test until more information is gathered. Paper-and-pencil testing will always be an option for students with special needs.

New online item types will be piloted in grades 6-8 this year. These items will feature new tools and online capabilities for students' responses.

Demos and tutorials will be available mid to late January 2011 for students and teachers to become familiar with the new item types as well as the format of items and the tools used during the 2009 online administration.

Visit [Washington's Online Testing Web site](#) to download tutorials, view demos, and more.

Item and Point Totals: Spring 2011

May 2011						
Item Type	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Multiple-Choice (1 point)	20	20	20	25	25	25
Completion (1 point)	6	6	6	5	5	5
Short-Answer (2 points)	4	4	4	5	5	5
Total Items (Questions)	30	30	30	35	35	35
Total Points	34	34	34	40	40	40
*Pilot Items	5	5	5	5	5	5
Total Items on Assessment	35	35	35	40	40	40

*Pilot items are embedded in the assessment. These items do not count towards the students' scores.

State Testing Windows

Spring 2011 Mathematics Measurements of Student Progress (MSP) Testing Window

Grades 3-8	Paper-Pencil: May 2 – May 19
Grades 4-8	Online: May 2 – June 3

A complete schedule of state testing can be accessed at:

<http://www.k12.wa.us/assessment/StateTesting/timelines-calendars.aspx#spring2011>

Spring 2011 End-of-Course (EOC)/EOC Makeup Exams Testing Window

Beginning in Spring 2011, students will take end-of-course exams in Algebra 1/Integrated Mathematics 1 and Geometry/Integrated Mathematics 2 based on the 2008 Standards. Students in the class of 2013 and beyond must pass both EOC exams or both EOC makeup exams to meet the mathematics graduation requirement. Students in seventh and eighth grade who take an Algebra 1/Integrated Mathematics 1 or Geometry/Integrated Mathematics 2 course are required to take the grade-level state MSP assessment (for NCLB purposes) and the appropriate end-of-course exam.

Further information regarding EOCs and EOC makeup assessments is located at

<http://www.k12.wa.us/Mathematics/End-of-CourseExams.aspx>.

Sample Items for Classroom Use

The need to build a robust item bank with items that assess the new mathematics standards prevents the release of actual test items that have been used operationally for the current mathematics standards. In this document are three sources of sample items available for classroom use: (1) New samples for 2011, (2) An alignment of Released Items and Practice Tests to the current performance expectations, and (3) Sample items provided in the *Changes for 2010 and Beyond* document that are still pertinent. Items on the MSP will consist of multiple-choice, completion, and short-answer items.

New Samples for 2011

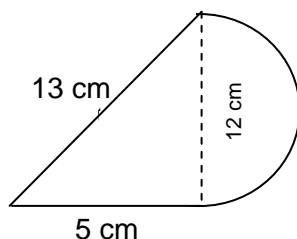
These items are samples that are aligned with the K-12 Mathematics Learning Standards. They have not gone through the comprehensive review process that test items must pass before placement on an actual state test. Teachers may still use these items as classroom exercises, or informal checks for understanding, as teachers have the ability and choice to clarify any questions about these items as students are working on them.

Grade 6

Multiple-Choice Item

Sample item for performance expectation 6.4.B

The figure is made up of a triangle and a semicircle.



Which measurement is closest to the perimeter of the figure?

- O A. 30 centimeters
- O B. 37 centimeters
- O C. 56 centimeters
- O D. 87 centimeters

Answer: B

Completion Item

Sample item for performance expectation 6.3.F

Marta collected data on the number of days it rained in September last year. She recorded the data in a table.

Days in September

Rain	
No Rain	

Based on the data in the table, determine the experimental probability that it rained on a random day in September.

Write your answer on the line.

**What is the experimental probability that it rained
on a random day in September? _____**

Answer: $\frac{12}{30}$, $\frac{2}{5}$, 0.4, 40% or equivalent

Short-Answer Item

Sample item for performance expectation 6.5.B

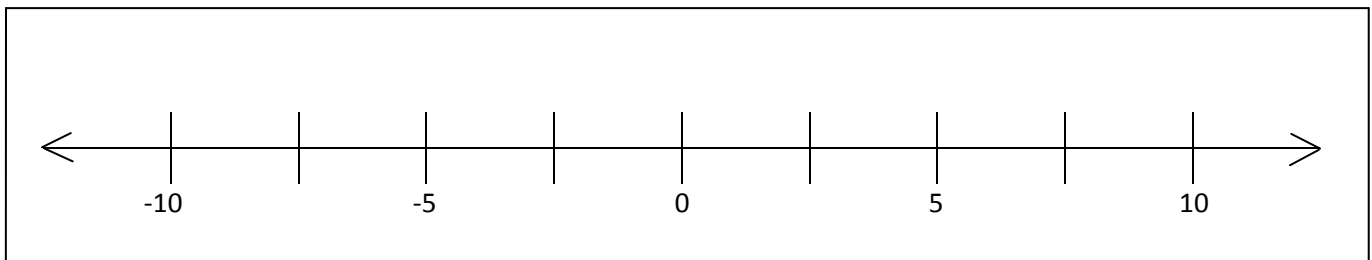
Look at the integers.

-2 , 4 , -7

Plot and label the integers on the number line.

Be sure to:

- Include a point "•" for each integer.
- Include a number label for each plotted point



Rubric:

2 – point: Student shows understanding of locating positive and negative integers on the number line by plotting and labeling -2 , 4 , and -7 .

1 – point: Student does one of the following:

- Plots points at -2 , 4 , and -7 .
- Plots and labels two of the three integers: -2 , 4 , and/or -7 .

Grade 7

Multiple-Choice Item

Sample item for performance expectation 7.2.E

The table represents a proportional relationship.

x	3	6	12	24
y	1	2	4	8

Which equation matches the values in the table?

A. $y = 2x$

B. $y = \frac{1}{2}x$

C. $y = 3x$

D. $y = \frac{1}{3}x$

Answer: D

Completion Item

Sample item for performance expectation 7.1.C

Determine the sum.

$$4\frac{1}{5} + \left(-2\frac{1}{4}\right) + 1\frac{11}{20}$$

Write your answer on the line.

What is the sum? _____

Answer: $3\frac{1}{2}$, 3.5, or equivalent

Short-Answer Item

Sample item for performance expectation 7.2.D

Mr. Tomas built a model train. The scale between the model train and the actual train is 1 to 160. The model train is $3\frac{3}{4}$ inches long.

Determine the length, in feet, of the actual train.

Show the steps you used to solve the problem.

What is the length of the actual train? _____ feet

Rubric:

2 – point: Student shows understanding of solving a problem related to scale by doing the following

- Shows work using $3\frac{3}{4}$ and a scale of 1 to 160
- Writes 50

1 – point: Student does one of the following:

- Shows work using $3\frac{3}{4}$ and a scale of 1 to 160 that could lead to the length of the actual train
- Writes 50

Grade 8

Multiple-Choice Item

Sample item for performance expectation 8.2.C

What is the sum of the measures of the interior angles of a 7-sided polygon?

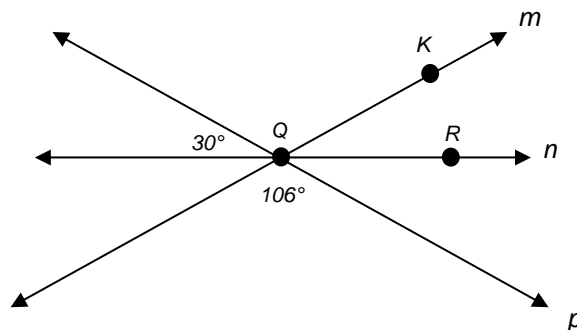
- O A. 1800°
- O B. 1260°
- O C. 900°
- O D. 360°

Answer: C

Completion Item

Sample item for performance expectation 8.2.A

In the figure, lines m , n , and p intersect at point Q .



Determine the measure of $\angle KQR$.

Write your answer on the line.

What is the measure of $\angle KQR$? _____ $^\circ$ (degrees)

Answer: 44

Completion Item

Sample item for performance expectation 8.4.B

The population of the United States is approximately 3.2×10^8 and the population of India is approximately 1.2×10^9 .

Determine approximately how many times the population of the United States is the population of India.

Show work using the numbers written in scientific notation.

Approximately how many times the population of the United States is the population of India? _____

Rubric:

2 – point: Student shows understanding of solving problems involving operation with numbers in scientific notation by doing the following:

- Shows work using 3.2×10^8 and 1.2×10^9
- Writes 3.75, 3.8, or 4

1 – point: Student does on of the following:

- Shows work using 3.2×10^8 or 320,000,000 and 1.2×10^9 or 1,200,000,000 that could lead to the answer
- Writes 3.75, 3.8, or 4

Alignment of Released Items to Current Performance Expectations

OSPI has released items that appeared on previous tests (formerly the WASL). While the WASL has been replaced by the Measurements of Student Progress (MSP) and the End-of-Course (EOC) Exams, the WASL released items remain a valuable resource. Some of the released items align to the new K-12 mathematics standards and can be used in the classroom as they appeared on the WASL.

Some of the Released Items are only partially aligned to the new K-12 mathematics standards and can be used in the classroom with minor modifications or considerations. These considerations are described below.

(1) It is standard practice on our state assessments to write test questions with vocabulary targeted to the previous grade level or lower readability, except for required mathematics terms. As an example, third grade test questions are written at a second grade readability level. Some of the released items written for a standard in a particular grade on the WASL are the same standard assessed at a lower grade level on the MSP or EOC. If a WASL released item has moved down a grade level, the vocabulary in the item may be above the targeted readability level. Because teachers can choose to read items to students during classroom-based activities and/or assessments, this should not be a problem.

(2) Previous WASL items were written in the following formats: multiple-choice, short-answer, and extended response. MSP and EOC items are written in the following formats: multiple-choice, completion, and short-answer. Classroom-based activities and assessments are not limited to the formats of either assessment. The differences in item format will be noted in the comments section of the alignment table. Multiple-choice items have three options in grades 3-5 and four options in grades 6-High School EOC. If a Released Item has changed grade levels which would cause a difference in the number of options, it will also be noted under comments in the alignment table. Teachers can choose to give students experience with items of a different number of options or choose to add or eliminate an answer choice.

The alignment of the previously used Released Items and Practice Test items are organized by document grade level and year. When there is an alignment of the item to a current performance expectation (PE), the PE will be listed in the second column. The “Comments” column will describe the alignment, if any, and note any considerations such as difference in item format, or suggestions to increase rigor to meet current standards.

The following is a brief description of how to read the Alignment Tables:

Grade 3 2006 Released Items		
Item Number	PE	Comments
#1		Does not align.
#2	4.1.B	This P.E. is only assessed as multiple-choice on the MSP. This short-answer item involves factors and multiples of numbers . Suitable for a classroom-based activity/assessment.
#3	4.4.A	This P.E. is only assessed as multiple-choice on the MSP. This short-answer item involves representing quantities in equations using boxes and other symbols . Suitable for a classroom-based activity/assessment.

Shows item number in the document.

In this case, indicates that Item #3 in the Grade 3 2006 Released Items Document is aligned to the performance expectation 4.4.A in the new mathematics standards.

In this case, the comment explains that this PE on the MSP is only assessed as a multiple-choice item. Although this released item is in a short-answer format, teachers can choose to use this item in the classroom because it deals with **representing quantities in equations using boxes and other symbols**, a current performance expectation.

Alignment Tables

Comments provide a written description of the performance expectation assessed in the released item **in bold**. Released items are located at: <http://www.k12.wa.us/Mathematics/ReleasedItems.aspx>.

When applicable, comments will explain partial alignment, any possible changes needed to the item for complete alignment, changes in item format needed, suitability of item as a classroom activity or classroom-based assessment rather than as an example of an item that will be on the Measurements of Student Progress (MSP), etc.

Released items that are italicized are not aligned to the new mathematics performance expectations. The items are described for teachers' convenience for possible classroom enrichment.

Grade 6 Quick Guide

Grade 6 2006 Released Items	
Item Number	PE
#2	6.1.H
Grade 6 2007 Released Items	
Item Number	PE
#4	6.3.D
Grade 6 Practice Test	
Item Number	PE
#9	6.1.H
#16	6.4.E
#20	6.3.D
#30	6.2.A
#31	6.1.H
#34	6.3.D
#35	6.2.A
#40	6.3.D
#41	6.1.H
Grade 7 2006 Released Items	
Item Number	PE
#1	6.3.D
Grade 7 2007 Released Items	
Item Number	PE
#3	6.1.H
Grade 7 2008 Released Items	
Item Number	PE
#1	6.1.E
#3	6.3.A
#4	6.2.D
Grade 8 2006 Released Items	
Item Number	PE
#1	6.3.D
#2	6.6.C (6.3.D)

Grade 8 2007 Released Items	
Item Number	PE
#1	6.6.G (6.2.D)
#3	6.2.A
#6	6.6.G (6.3.D)
Grade 8 2008 Released Items	
Item Number	PE
#2	6.4.D
#3	6.2.A
#6	6.3.D
Grade 8 Practice Test	
Item Number	PE
#1	6.3.D
#2	6.2.A
#9	6.2.A
#11	6.3.D
#16	Partially aligned to 6.4.C
#17	6.6.B (6.1.H)
#18	6.3.D
#19	Partial alignment to 6.3.D
#21	Partial alignment to 6.4.C
#22	6.2.A
#27	6.2.A
#30	6.2.D
#33	6.2.A
#37	6.6.B/6.6.C (6.1.H)

Grade 8 Practice Test	
Item Number	PE
#40	*6.3.D *with modification
#41	6.2.B
High School Practice Tests	
Item Numbers	PE
4	6.3.D
6	6.2.A
22	6.4.E
28	6.1.H
40	6.6.C(6.3.D)
2007 High School Released Items	
Item Numbers	PE
11	6.6.B(6.3.D)
15	6.6.C(6.3.D)
2008 High School Released Items	
Item Numbers	PE
2	6.3.D
3	6.6.C(6.4.G)
7	6.4.B

Grade 7 Quick Guide

Grade 6 2008 Released Items	
Item Number	PE
#3	7.4.D
Grade 6 Practice Test	
Item Number	PE
#22	7.4.D
#36	7.4.A/7.1.G
Grade 7 2007 Released Items	
Item Number	PE
#4	Partial alignment to 7.2.C
Grade 8 2007 Released items	
Item Number	PE
#5	7.4.D
Grade 8 2008 Released Items	
Item Number	PE
#1	7.3.D
#5	Partial alignment to 7.4.D
Grade 8 Practice Test	
Item Number	PE
#8	7.6.G (7.4.D)
#10	7.6.G (7.4.D)

#15	7.6.G (7.3.D)
#24	7.6.C (7.4.C)
#28	7.4.B
#35	7.2.B
#38	Partial alignment to 7.3.D
#42	7.4.E
2006 High School Practice Test	
Item Numbers	PE
2	7.2.C
7	7.5.A
13	7.6.C(7.3.D)
14	7.4.B
16	7.2.I
21	7.1.A
36	7.3.A
38	7.6.G(7.4.D)
2007 High School Released Items	
Item Numbers	PE
4	7.2.G
2008 High School Released Items	
Item Numbers	PE
8	7.1.F

Grade 8 Quick Guide

Grade 6 2008 Released Items	
Item Number	PE
#2	8.2.D
Grade 6 Practice Test	
Item Number	PE
#12	8.2.D
#23	8.2.D
#28	8.2.D
Grade 7 2006 Released Items	
Item Number	PE
#2	Partial alignment to 8.1.B
Grade 7 2007 Released Items	
Item Number	PE
#5	8.3.G
Grade 7 2008 Released Items	
Item Number	PE
#2	Partial alignment to 8.2.D
Grade 8 2007 Released items	
Item Number	PE
#2	8.2.F
#4	Partial alignment to 8.2.D
Grade 8 Practice Test	
Item Number	PE
#4	8.3.F

#14	8.2.D
#20	8.3.F
#25	8.3.F
#39	8.5.G(8.2.F)
2006 High School Practice Test	
Item Numbers	PE
1	8.5.C(8.2.E)
11	8.5.C(8.3.F)
15	8.2.A,C
19	8.2.D
26	8.2.D
29	8.5.G(8.4.A)
35	8.4.C
41	8.3.F
42	8.3.F
2007 High School Released Items	
Item Numbers	PE
1	8.4.A
2	8.5.C(8.3.G)
3	8.4.B
8	8.3.F
15	8.5.C(8.2.E)
2008 High School Released Items	
Item Numbers	PE
1	8.4.A
4	8.2.D
5	8.3.F
9	8.3.G

Grades 6-8 and High School Alignment Tables

Grade 6 2006 Released Items		
Item Number	PE	Comments
#1	5.3.I	This item assesses solving word problems about areas of quadrilaterals . Multi-digit division may be used.
#2	6.1.H	This item assesses solving word problems involving operations with fractions .
#3	5.6.I (5.2.H)	This PE is only assessed with short-answer on the MSP. This extended-response item assesses summarizing mathematical information and explaining reasoning and solving multi-step word problems involving addition and subtraction of decimals . This item is suitable for a classroom-based exercise.
Grade 6 2007 Released Items		
Item Number	PE	Comments
#1	5.2.H	This item assesses solving word problems involving addition and subtraction of decimals .
#2	<i>Not aligned</i>	<i>This item requires students to choose the appropriate unit of measurement for the situation.</i>
#3	Partially aligned to 5.3.A	This item assesses identifying a figure with a given attribute . Includes some figures not in standard (hexagon and octagon).
#4	6.3.D	This item assesses solving word problems involving percents .
#5	5.3.B	This PE is only assessed as multiple-choice or completion on the MSP. This short-answer item assesses identifying and measuring acute, right, and obtuse angles , and is suitable for a classroom exercise or assessment.
#6	<i>Not aligned</i>	<i>This extended response item requires students to plan for a skate park within given limitations of area.</i>
Grade 6 2008 Released Items		
Item Number	PE	Comments
#1	5.3.C	This item assesses classifying triangles by angle measure . Items on the Grade 5 MSP have only 3 answer choices; this item has 4 answer choices.
#2	8.2.D	This item assesses representing the effect of a rotation of a geometric figure on the coordinate plane .
#3	7.4.D	This item assesses interpreting a circle graph .
#4	8.3.G	This item assesses solving problems using counting techniques .
#5	5.6.F (5.2.H)	This item assesses using strategies to solve problems involving addition and subtraction of decimals .
#6	5.6.E (5.2.H)	This PE is only assessed as multiple-choice and short-answer on the MSP. This extended response item assesses using strategies to solve problems involving addition and subtraction of decimals . Students also need background knowledge of unit conversion (4.4.B). This item is suitable for a classroom exercise or assessment.

Grade 6 Practice Test		
Item Number	PE	Comments
#1	<i>Not aligned</i>	<i>This item requires students to identify an appropriate survey question.</i>
#2	5.4.C	This item assesses evaluating expressions using substitution.
#3	5.6.E (5.1.F)	This item assesses using strategies to solve a problem involving multi-digit division.
#4	6.3.B	This item assesses writing ratios to represent a rate.
#5	5.6.B/5.6.C (5.1.F)	These PEs are only assessed as multiple-choice on the MSP. This short-answer item assesses identifying extraneous information and identifying missing information. This item is suitable for a classroom exercise or activity.
#6	5.3.I	This item assesses solving word problems involving areas of quadrilaterals and triangles. Items on the Grade 5 MSP have only 3 answer choices; this item has 4 answer choices.
#7	<i>Not aligned</i>	<i>This extended response item requires students to create a workout plan that fits the given requirements of time.</i>
#8	5.5.B	This item assesses determining the mean of a data set. The definition of mean is provided in the item. New items written for the MSP do not provide the definition.
#9	6.1.H	This item assesses solving word problems involving operations with decimals.
#10	5.3.G	This PE is not assessed on the MSP but is designated for classroom assessment. This item assesses drawing quadrilaterals from given information about sides and angles.
#11	6.2.A	This item assesses writing an equation with variables to represent a situation.
#12	8.2.D	This item assesses representing translations but not on a coordinate plane.
#13	4.4.G	This item assesses determining simple probability.
#14	5.4.A	This PE is only assessed as short-answer on the MSP. This multiple-choice item assesses extending a pattern.
#15	5.6.I (5.5.B)	This PE is only assessed as short-answer on the MSP. This extended response item assesses drawing conclusions and explaining reasoning by comparing information in a table involving mean (average). This item is suitable for a classroom exercise.
#16	6.4.E	This item assesses determining volume of rectangular prisms.
#17	3.4.D* *with modification	This item assesses measuring perimeter. Change item to measuring to the nearest whole centimeter to meet Grade 3 requirements.
#18	Partially aligned to 5.3.A, 5.3.B and 5.3.H	This item assesses identifying quadrilaterals with acute and obtuse angles. This item includes figures not included in the standards and more than 3 answer choices.
#19	<i>Not aligned</i>	<i>This item requires students to communicate, using mathematical language, a plan to build a ladder.</i>
#20	6.3.D	This item assesses solving a word problem involving ratios.

Grade 6 Practice Test <i>continued...</i>		
Item Number	PE	Comments
#21	4.4.G	This item assesses determining simple probability .
#22	7.4.D	This item assesses interpreting circle graphs .
#23	8.2.D	This item assesses representing and explaining the effect of a rotation , but not a geometric figure on a coordinate plane.
#24	5.4.A	This item assesses describing a rule and extending a pattern .
#25	<i>Not aligned</i>	<i>This item requires students to identify the unit of measurement appropriate to a situation.</i>
#26	3.6.I (3.5.E)	This item assesses drawing conclusions by analyzing a table .
#27	5.2.H	This item assesses solving a word problem involving addition and subtraction of fractions .
#28	8.2.D	This item assesses explaining a transformation , but not on a coordinate plane.
#29	<i>Not aligned</i>	<i>This extended response item requires students to communicate steps needed to determine the area of a lawn.</i>
#30	6.2.A	This item assesses writing an equation with variables to represent a situation .
#31	6.1.H	This item assesses solving word problems involving operations with fractions . The item, as it appears in the document, should be modified because the correct answer can be obtained for the wrong reason. Change the number of badges to 12. Change answer choices to: A. $\frac{3}{8}$ yard; B. $\frac{2}{3}$ yard; C. $1\frac{1}{2}$ yards; D. $2\frac{2}{3}$ yards. The correct answer will be C. This item has been corrected and can be seen in the <i>Sample Items from Changes for 2010 and Beyond</i> section of the <i>Grades 6-8 Updates for 2011</i> document.
#32	5.3.H	This item assesses determining lines of symmetry , although figures other than quadrilaterals and triangles are included. Grade 5 on the MSP has 3 answer choices; this item has 6 answer choices.
#33	4.4.E	This item assesses determining the median of a data set . The definition of median is included in this item. New items written for the MSP do not provide the definition.
#34	6.3.D	This item assesses solving word problems involving percents .
#35	6.2.A	This item assesses writing an expression with variable to represent a situation .
#36	7.4.A/7.1.G	These PEs are only assessed as multiple-choice and short-answer on the MSP. This extended-response item assesses representing sample space and solving word problems involving rational numbers and is suitable for classroom-based exercise or assessment.
#37	4.4.G	This item assesses determining simple probability . Fourth grade items on the MSP have only 3 answer choices. This item has 4 answer choices.
#38	4.4.B	This item assesses solving problems involving unit conversions . Fourth grade items on the MSP have only 3 answer choices. This item has 4 answer choices.

Grade 6 Practice Test <i>continued...</i>		
Item Number	PE	Comments
#39	(5.6.E) 5.4.A	This item assesses using strategies to solve problems . Students may solve by extending a pattern .
#40	6.3.D	This item assesses solving word problems involving rate and percents . Students will see this as a sample problem in the MSP Directions, but can still be used as a classroom exercise.
#41	6.1.H	This item assesses solving word problems involving operations with fractions .
#42	4.2.E	This item assesses comparing fractions (including mixed numbers) with symbols . This item includes a symbol (\geq) not included in fourth grade standards. Eliminate answer choice D to align with the fourth grade.
Grade 7 2006 Released Items		
Item Number	PE	Comments
#1	6.3.D	This item assesses solving word problems involving percents .
#2	Partial alignment to 8.1.B	This item assesses graphing inequalities on the number line . This item also requires students to describe the inequality in words which is not assessed on the MSP but is suitable for a classroom-based activity.
#3	<i>Not aligned</i>	<i>This extended response item requires students to draw a view of a park after being given two different perspectives.</i>
Grade 7 2007 Released Items		
Item Number	PE	Comments
#1	<i>Not aligned</i>	<i>This item requires students to choose the unit of measurement appropriate to a situation.</i>
#2	4.4.E (with modification) or 5.5.B	This item assesses understanding of median, mode, range, and mean of a set of data . Eliminate answer choice A for grade 4, which involves the mean. Students in grade 5 would require background knowledge from grade 4.
#3	6.1.H	This item assesses solving word problems involving operations with decimals . Students need back ground knowledge from grade 4 (16 oz. = 1 pound)
#4	Partial alignment to 7.2.C	This item assesses solving problems involving similar figures .
#5	8.3.G	This item assesses solving problems involving counting techniques and Venn diagrams .
#6	<i>Not aligned</i>	<i>This extended-response item requires students to write and answer two questions that can be obtained by reading a schedule.</i>
Grade 7 2008 Released Items		
Item Number	PE	Comments
#1	6.1.E	This item assesses comparing and ordering non-negative decimals in lists .
#2	Partial alignment to 8.2.D	This item assesses representing the effect of rotations of a figure , but not on the coordinate plane.

Grade 7 2008 Released Items <i>continued...</i>		
Item Number	PE	Comments
#3	6.3.A	This item assesses identifying part to whole relationships .
#4	6.2.D	This PE is only assessed with multiple-choice and completion items on the MSP. This short-answer item assesses using order of operations to evaluate a mathematical expression .
#5	<i>Not aligned</i>	<i>This item requires students to apply 360° in a circle. This item is suitable for classroom enrichment in Core Content area 6.4.</i>
#6	4.5.E (4.4.B)	This PE is only assessed with multiple-choice and short-answer on the MSP. This extended response item assesses solving problems involving unit conversions, including time and is suitable for a classroom-based exercise or assessment.
Grade 8 2006 Released Items		
Item Number	PE	Comments
#1	6.3.D	This item assesses solving word problems involving rate .
#2	6.6.C (6.3.D)	This item assesses using strategies to solve problems involving rates .
#3	5.5.C	This PE is only assessed with multiple-choice and short-answer items on the MSP. This extended response item assesses constructing line graphs . One way to change the item is to provide the title and axes labels and ask students to provide a scale and graph the data. Suitable for a classroom-based exercise or assessment.
Grade 8 2007 Released Items		
Item Number	PE	Comments
#1	6.6.G (6.2.D)	This PE is only assessed with short-answer on the MSP. This multiple-choice item assesses drawing conclusions in a situation involving order of operations .
#2	8.2.F	This item assesses applying the Pythagorean Theorem to solve problems .
#3	6.2.A	This item assesses writing equations that represent a situation .
#4	Partial alignment to 8.2.D	This item assesses representing the effect of one or more transformations , but not on a coordinate plane.
#5	7.4.D	This item assesses constructing stem-and-leaf plots
#6	6.6.G (6.3.D)	This PE is only assessed with short-answer on the MSP. This extended-response item assesses extracting mathematical information from a graph, drawing conclusions, and justifying reasoning and solving problems involving rate . This item is suitable for a classroom-based exercise or assessment.
Grade 8 2008 Released Items		
Item Number	PE	Comments
#1	7.3.D	This item involves solving problems involving volume . (Clarification in item needed: boxes are rectangular prisms.)
#2	6.4.D	This item assesses recognizing two-dimensional representations of three-dimensional figures .

Grade 8 2008 Released Items <i>continued...</i>		
Item Number	PE	Comments
#3	6.2.A	This item assesses writing a mathematical equation with variables to represent information in a situation.
#4	<i>Not aligned</i>	<i>This item requires students to use logic to analyze a situation.</i>
#5	Partial alignment to 7.4.D	This item assesses interpreting a circle graph. Students require the background knowledge that a circle has 360° .
#6	6.3.D	This PE is only assessed with multiple-choice and short-answer items on the MSP. This extended-response item assesses solving problems involving rate. This item is suitable for a classroom-based exercise or assessment.
Grade 8 Practice Test		
Item Number	PE	Comments
#1	6.3.D	This item assesses solving problems involving ratios.
#2	6.2.A	This item assesses writing mathematical expressions with variables to represent a situation.
#3	5.6.E (5.2.H)	This item assesses using strategies to solve problems involving addition and subtraction of decimals.
#4	8.3.F	This item assesses determining probabilities for independent events.
#5	G.4.B/ G.4.C	This item assesses determining the coordinates of a point and applying properties of quadrilaterals in the coordinate plane.
#6	7.4.C	This item assesses describing a data set using measure of center (determining the missing data value for a mean).
#7	5.6.E (5.1.F)	This item assesses using strategies to solve problems involving multi-digit division.
#8	7.6.G (7.4.D)	This PE is only assessed with short-answer on the MSP. This extended-response item assesses extracting and organizing mathematical information to draw conclusions and justify reasoning and interpreting circle graphs.
#9	6.2.A	This item assesses writing expressions with variables to represent situations.
#10	7.6.G (7.4.D)	This item assesses extracting mathematical information to make inferences and justify reasoning and interpreting circle graphs.
#11	6.3.D	This item assesses solving word problems involving rates.
#12	5.4.A	This PE is only assessed with short-answer on the MSP. This multiple-choice item assesses determining and extending a pattern. Grade 5 items on the MSP have only three answer choices; this item has four answer choices.
#13	7.3.D	This item assesses solving word problems involving surface area of a cylinder.
#14	8.2.D	This item assesses representing the effect of one or more transformations on the coordinate plane.

Grade 8 Practice Test <i>continued...</i>		
Item Number	PE	Comments
#15	7.6.G (7.3.D)	This PE is only assessed with short-answer on the MSP. This extended-response item assesses extracting and organizing mathematical information involving surface area to draw conclusions and justify reasoning . This item is suitable for a classroom-based exercise or assessment.
#16	Partially aligned to 6.4.C	This item assesses solving word problems involving relationships among radius, diameter, and circumference of circles .
#17	6.6.B (6.1.H)	This PE is only assessed with multiple-choice items on the MSP. This short-answer item assesses identifying missing information and operations with decimals . This item is suitable for a classroom-based exercise or assessment.
#18	6.3.D	This information assesses solving word problems involving rate .
#19	Partial alignment to 6.3.D	This item assesses solving multi-step word problems involving percents and justifying reasoning
#20	8.3.F	This item assesses determining probability for dependent events .
#21	Partial alignment to 6.4.C	This item assesses solving word problems involving the relationship between the radius and area of a circle . This item uses notation not used in grade 6: m^2 . Use square meters.
#22	6.2.A	This item assesses writing an equation with variable to represent information in a given situation.
#23	G.6.D	This item assesses verifying the effect that changing two linear dimensions has on area .
#24	7.6.C (7.4.C)	This item assesses using strategies to solve a problem involving measures of center .
#25	8.3.F	This item assesses determining probabilities for independent events .
#26	5.1.F	This item assesses solving word problems involving multi-digit division . Multiple-choice items on the fifth grade MSP have three answer choices; this item has four answer choices.
#27	6.2.A	This item assesses writing an equation using variables to represent a situation .
#28	7.4.B	This item assesses determining probability and predicting an outcome .
#29	<i>Not aligned</i>	<i>This item requires logic to solve a problem.</i>
#30	6.2.D	This item assesses using order of operations to evaluate expressions .
#31.	<i>Not aligned</i>	<i>This item requires students to identify the ordered pair of a point that will change a trapezoid to a rectangle.</i>
#32	G.5.B	This item assesses determining properties of transformations .
#33	6.2.A	This item assesses writing mathematical equations to represent information (including defining variables) .

Grade 8 Practice Test <i>continued...</i>		
Item Number	PE	Comments
#34	4.5.H (4.4.C)	This PE is only assessed with short-answer on the MSP. This extended-response item assesses analyzing and evaluating solutions involving elapsed time . This item is suitable for a classroom-based exercise or assessment.
#35	7.2.B	This item assesses solving problems involving proportional relationships .
#36	5.1.F	This item assesses solving word problems involving multi-digit division . Multiple-choice items on the fifth grade MSP have only three answer choices; this item has only four answer choices.
#37	6.6.B/6.6.C (6.1.H)	This item assesses identifying relevant information and using strategies to solve a problem involving operations with decimals and fractions . This item is suitable for a classroom-based exercise or assessment.
#38	Partial alignment to 7.3.D	This item assesses determining the expression that could be used to estimate surface area .
#39	8.5.G(8.2.F)	This PE is only assessed on the MSP with short-answer. This multiple-choice item assesses extracting information to apply Pythagorean Theorem to solve a problem .
#40	*6.3.D *with modification	This item assesses solving a word problem involving rates . Change “constant”rate to “mean”rate to clarify the problem.
#41	6.2.B	This PE is only assessed with short-answer on the MSP. This multiple-choice item assesses drawing graphs to represent given situations .
#42	7.4.E	This PE is designated for classroom-based assessment. This item assesses evaluating data displays for effectiveness .

2006 High School Practice Test		
Item Number	PE	Comments
1	8.5.C(8.2.E)	Cognitive complexity may not be high enough to fit this PE. This item assesses solving problems involving recalling perfect squares from 1 to 100 .
2	7.2.C	This item assesses solving problems involving similar figures .
3	8.2.D	This item does not include a coordinate plane. This item assesses the effect of one or more rotations .
4	6.3.D	This item assesses solving multi-step word problems involving rates .
5	M2.4.A/A2.6.A	This item assesses applying the fundamental counting principle to calculate probabilities in situations arising from two-stage experiments . Assessed as strength/weakness on Integrated Mathematics 2 EOC.
6	6.2.A	This item assesses writing an equation with variables to represent information in a table .

2006 High School Practice Test <i>continued...</i>		
Item Number	PE	Comments
7	Partially aligned to 7.5.A	This item assesses determining the coordinates of a given point in the coordinate plane . The student also needs to use the relation between the x- and y-value of the point.
8	A1.1.D/M2.1.C	This item assesses solving problems that can be represented by a quadratic function . Assessed as strength/weakness on Algebra 1 EOC and Integrated Mathematics 2 EOC. Use as a completion item worth 1 point.
9	G.6.C/M3.5.D	This item assesses applying formulas for volume of three-dimensional figures to solve problems . Assessed as strength/weakness on Geometry EOC.
10	A1.3.B/M1.2.B	This item assesses representing a function as a graph . Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
11	8.5.C(8.3.F)	This item assesses solving problems involving probabilities of independent events .
12	A1.1.A/M1.1.A	This item assesses selecting equations to model problems . Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
13	7.6.C(7.3.D)	This PE is only assessed with short-answer or multiple-choice on the MSP. This extended-response item assesses solving problems involving surface area and volume . This item is suitable for a classroom-based exercise.
14	7.4.B	This item assesses determining the theoretical probability of a particular event . Students will also need to determine areas of rectangles.
15	8.2.A,C	This item assesses identifying angles as supplementary and <i>demonstrating that the sum of the angles in a triangle is 180 degrees</i> .
16	G.6.F/M2.5.C	This item assesses solving problems involving measurement conversions within systems . Assessed on Geometry/Integrated Mathematics 2 EOC and EOC Makeup Year 2.
17	4.5.E(4.4.B)	This PE is only assessed with short-answer or multiple-choice on the MSP. This extended-response item assesses solving problems involving unit conversions, including time, and elapsed time . This item is suitable for a classroom-based exercise.
18	M2.6.B(M2.4.A)/ A2.8.A(A2.6.A)	This item assesses applying the fundamental counting principle to calculate probabilities in situations arising from compound events . Assessed as strength/weakness on Integrated Mathematics 2 EOC.
19	8.2.D	This item assesses the effect of one reflection .

2006 High School Practice Test <i>continued...</i>		
Item Number	PE	Comments
20	G.3.A/M2.3.E	This item assesses knowing and applying basic postulates and theorems about triangles . This is an example of a 2-point Short-Answer item assessing these PEs on Geometry/Integrated Mathematics 2 EOC and EOC Makeup Year 2.
21	7.1.A	This item assesses comparing and ordering rational numbers .
22	6.4.E	This item assesses determining the volume of rectangular prisms .
23	G.3.F/M2.3.J	This item assesses knowing and applying basic theorems about parallelograms . Assessed on Geometry/Integrated Mathematics 2 EOC and EOC Makeup Year 2.
24	G.6.D/M3.5.D	This item assesses verifying the effect that changing two linear dimensions has on perimeter and area . Assessed as strength/weakness on Geometry EOC using multiple-choice or completion items worth 1 point. Suggested edit to item: Ask only one question.
25	A1.2.E/M2.5.A	This item assesses using algebraic properties to factor polynomials . Assessed as strength/weakness on Algebra 1 EOC and Integrated Mathematics 2 EOC.
26	8.2.D	This item assesses the effect of one translation .
27	A1.1.B/M1.1.B	This item assesses solving problems that can be represented by linear functions . Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
28	6.1.H	This item assesses solving multi-step word problems involving operations with decimals and verifying the answer .
29	8.5.G(8.4.A)	Cognitive complexity may not be high enough to fit this PE.
30	A1.8.B(A1.1.C)/ M1.8.B(M1.1.C) <i>Partially aligned</i>	This item assesses applies strategies to solve problems that can be presented by a system of two linear equations . However, this problem involves two equations with three variables. These PEs are assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
31	<i>Not aligned</i>	<i>This item requires students to draw conclusions from a diagram.</i>
32	4.4.E	This item assesses determining the median of a set of data .
33	A1.3.B/M1.2.B	This item assesses representing a function with a symbolic expression or as a graph, and making connections among these representations . Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
34	A1.1.D/M2.1.C	This item assesses solving problems that can be represented by quadratic functions and equations . The content aligns with PEs A1.1.D/M2.1.C; however, these PEs on the Algebra 1 EOC and Integrated Mathematics 1 EOC will be assessed using multiple-choice or completion items worth one point. This item is suitable for classroom-based activity/assessment.

2006 High School Practice Test <i>continued...</i>		
Item Number	PE	Comments
35	8.4.C	This PE is only assessed with multiple-choice or completion on the MSP. This item assesses evaluating numerical expressions involving non-negative integer exponents.
36	7.3.A	This item assesses determining the volume of cylinders.
37	5.6.E(5.3.F)	This item assesses solving problems involving areas of triangles.
38	7.6.G(7.4.D)	This PE is only assessed with short-answer on the MSP. This item assesses extracting information from graphs to construct circle graphs.
39	<i>Not aligned</i>	<i>This item requires students to describe data in a bar graph.</i>
40	6.6.C(6.3.D)	This item assesses solve problems involving percents.
41	8.3.F	This item assesses determining probabilities for mutually exclusive events.
42	8.3.F	This item assesses determining probabilities for independent events.
2007 High School Released Items		
Item Number	PE	Comments
1	8.4.A	This item assesses translating numbers written in scientific notation into standard form.
2	8.5.C(8.3.G)	This item assesses solving problems involving counting techniques and Venn diagrams.
3	8.4.B	This item assesses solving problems involving operations with numbers in scientific notation.
4	7.2.G	This item assesses determining the unit rate in a proportional relationship.
5	G.3.A/M2.3.E	This item assesses knowing and applying basic postulates and theorems about triangles. Assessed on Geometry/Integrated Mathematics 2 EOC and EOC Makeup Year 2.
6	G.5.B/M3.2.B	This item assesses applying properties of transformations. Assessed as strength/weakness on Geometry EOC.
7	8.3.F	This item assesses determining probabilities for independent events.
8	A1.6.D/M1.3.F	This item assesses finding the equation of a linear function that fits bivariate data. Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1. Suggested edit to item: Change question to "Which equation represents a line that fits the data?"
9	A1.1.A/M1.1.A	This item assesses selecting functions and equations to model problems. Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
10	A1.1.A/M1.1.A	This item assesses selecting functions and equations to model and solve problems. Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.

2007 High School Released Items <i>continued...</i>		
Item Number	PE	Comments
11	6.6.B(6.3.D)	This item assesses identifying extraneous information related to solving multi-step word problems involving ratios.
12	G.6.C/M3.5.D	This item assesses applying formulas for volume of three-dimensional figures to solve problems. Problems assessing these PEs on the Geometry EOC will be either multiple-choice or completion worth 1 point.
13	8.5.C(8.2.E)	Cognitive complexity may not be high enough to fit this PE.
14	A1.8.B(A1.3.C)/ M1.8.B(M1.2.C)	This item assesses selecting and applying strategies to solve problems that involve solving for x in the equation $f(x)=b$. Problems assessing these PEs on the Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1 will not have a context and will be either multiple-choice or completion worth 1 point. Students should be familiar with the following terms: inversely proportional, varies inversely, inverse variation.
15	6.6.C(6.4.E)	This item assesses solving problems involving surface area of rectangular prisms.
16	G.5.C/M3.2.C	This item assesses describing a composition of translations and reflections that superimposes one figure on the other given two congruent figures in a coordinate plane. Content of this item aligns; however these PEs are assessed as strength/weakness using only multiple-choice items on Geometry EOC.
17	<i>Partially aligned</i>	This item could be edited to align with A1.6.B/M1.5.C by asking students to make valid inferences or draw conclusions based on the data or with A1.6.D/M1.3.F by asking students to find an equation that fits the data.
18	A1.1.C/M1.1.C	This item assesses solving problems that can be represented by a system of two linear equations. Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
19	A1.1.B/M1.1.B	This item assesses solving problems that can be represented by linear equations. Assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1.
20	<i>Not aligned</i>	This item includes elements that align with G.6.C/M3.5.D (determine volume of sand) but the majority of the content of this item is below Geometry/Integrated Mathematics 3 level.

2008 High School Released Items		
Item Number	PE	Comments
1	8.4.A	This item assesses representing numbers in scientific notation.
2	6.3.D	This item assesses solving multi-step word problems involving rate.
3	6.6.C(6.4.G)	This item assesses solving problems involving surface area of rectangular prisms.
4	8.2.D	This item assesses the effect of one rotation.
5	8.3.F	This item assesses determining probabilities for dependent events.
6	A1.1.C/M1.1.C	This item assesses solving problems that can be represented by a system of two linear equations. Content of this item aligns; however, these PEs on the Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1 will be assessed using completion or short-answer. Suggested item edit: Change the question to "How many bags of popcorn were sold?" and change the item to completion.
7	6.3.D, 6.4.B	Items on the MSP will only assess PE within the same area of emphasis, i.e. 6.3.C and 6.3.D. This items assesses PE from two different areas of emphasis so would not be used as an MSP item. This item assesses solving multi-step word problems involving percents and determining the area of composite figures that can be divided into triangles and rectangles.
8	7.1.F	This item assesses writing an equation that corresponds to a given problem situation.
9	8.3.G	This item assesses solving multi-step problems using counting techniques and verifying the answer.
10	A1.8.E(A1.6.B)/ M1.8.E(M1.5.C)	This item assesses reading and interpreting graphs to make valid inferences and draw conclusions based on data. These PEs are assessed on Algebra 1/Integrated Mathematics 1 EOC and EOC Makeup Year 1. Suitable for classroom-based activity/assessment.

Sample Items from Changes for 2010 and Beyond

These sample items were available in the *Changes for 2010 and Beyond* document and are still appropriate for the labeled performance expectation. Some of the items have been edited from 2010 for clarity thanks to feedback from the field. If the sample item is a Released Item, the information has now been added to the sample item.

Grade 6

Multiple-Choice Item

Sample item for performance expectation 6.3.D - Taken from Grade 8 Sample Test, #11

Driving to a family reunion, the Schmitts traveled 810 miles in 15 hours. Returning home, they traveled at a mean speed of 6 miles per hour faster than the mean speed they had traveled to the reunion.

How long did it take the Schmitts to drive home?

- O A. 9.0 hours
- O B. 13.5 hours
- O C. 15.0 hours
- O D. 16.9 hours

Answer: B

Completion Items

Sample item for performance expectation 6.1.D

Determine the product.

$$\frac{1}{2} \times \frac{2}{3}$$

Write your answer on the line.

What is the product? _____

Answer: $\frac{2}{6}$, $\frac{1}{3}$, or equivalent

Sample item for performance expectation 6.4.E

Sally wanted to cover her stamp box. The box was 3.5 inches long, 6 inches wide, and 2.5 inches high.

Determine the surface area, in square inches, of the stamp box.

Write your answer on the line.

What is the surface area, in square inches, of the stamp box? _____ sq. in.
--

Answer: 89.5, or equivalent

Short-Answer Item

Sample item for performance expectation 6.1.H This item was taken from the Grade 6 Sample Test. The numbers in the item and answer choices have been modified because the answer with the previous numbers could be obtained for the wrong reason.

Maria is making 12 badges. Each badge uses $4\frac{1}{2}$ inches of ribbon. She wants to buy the exact amount of ribbon needed to make the badges.

How much ribbon should she buy?

- O A. $\frac{3}{8}$ yard
- O B. $\frac{2}{3}$ yard
- O C. $1\frac{1}{2}$ yards
- O D. $2\frac{2}{3}$ yards

Show how you got your answer using words, numbers, and/or pictures.

Rubric:

2-point: Student shows understanding of solving problems involving operations with fractions by doing the following:

- Selects C
- Shows work using 12 and $4\frac{1}{2}$

1-point: Student does one of the following:

- Selects C
- Shows work using 12 and $4\frac{1}{2}$ that could lead to the amount of ribbon

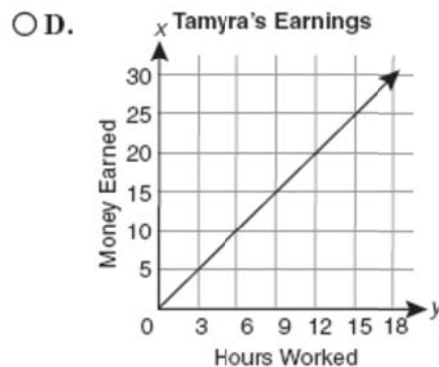
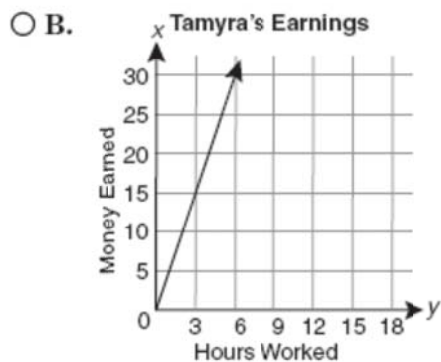
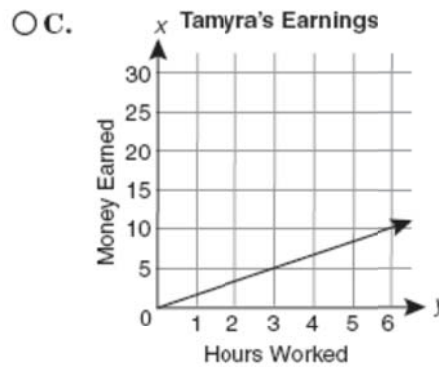
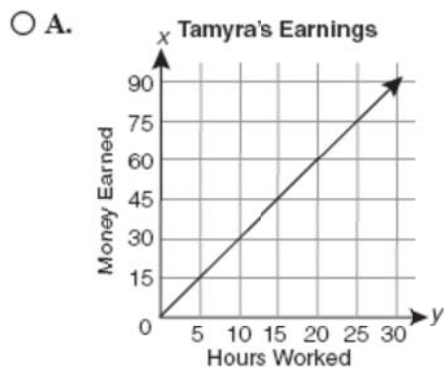
Grade 7

Multiple-Choice Item

Sample item for performance expectation 7.2.D - Taken from Grade 8 Sample Test, #41

Tamyra is babysitting to earn money to visit her aunt. She earns \$3.00 for each hour of babysitting.

Which graph represents Tamyra's earnings from babysitting?



Answer: A

Completion Items

Sample item for performance expectation 7.1.E

Solve the equation for x .

$$36 = 4x - 10$$

Write your answer on the line.

What is the value of x? _____

Answer: $11\frac{1}{2}$, 11.5, $\frac{46}{4}$, or equivalent

Sample item for performance expectation 7.4.B

Anton has a 10-sided regular polyhedron with a different number on each face, starting with 0 and ending with 9.

Use theoretical probability to predict the number of times a prime number would be rolled when Anton rolls the polyhedron 80 times.

Write your answer on the line.

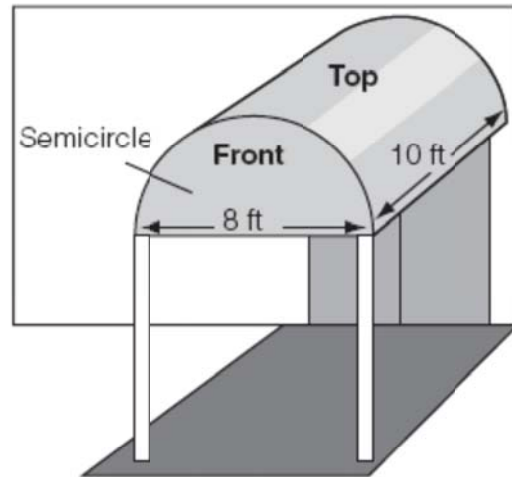
How many times would a prime number be rolled when Anton rolls the polyhedron 80 times? _____
--

Answer: 32

Short-Answer Item

Sample item for performance expectation 7.3.D - Taken from Grade 8 Sample Test, #13

Bella Restaurant is building a curved awning for the entrance to their restaurant. They need material for only the top and the front of the awning.



Area of a circle = πr^2
Circumference of a circle = πd

Find the surface area of the awning to determine the total amount of canvas necessary to make the awning.

Show your work using words, numbers and/or pictures.

Be sure to label your answer.

How much canvas is necessary to make the awning? _____

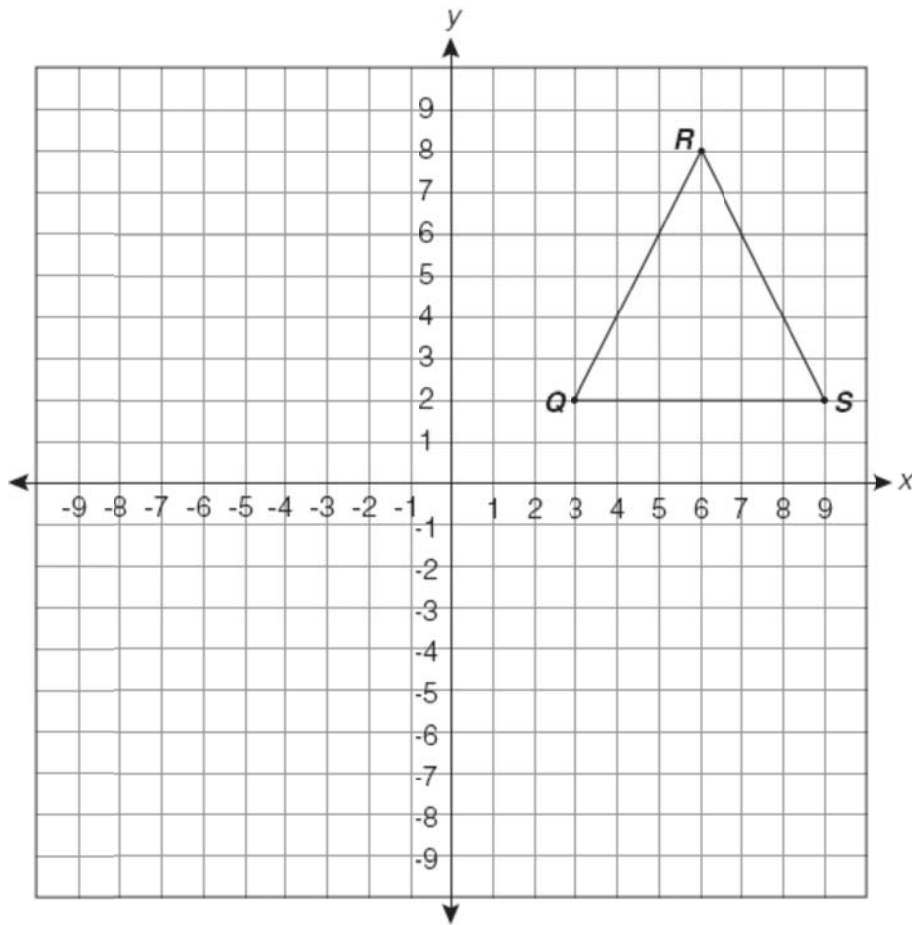
Rubric and sample papers are included with the Grade 8 Sample Test online.

Grade 8

Multiple-Choice Item

Sample item for performance expectation 8.2.D - Taken from Grade 8 Sample Test, #14

Look at the triangle in the graph.



First reflect the isosceles triangle across the x -axis. Then translate it 12 units to the left.

Which ordered pair represents the new coordinate for vertex S?

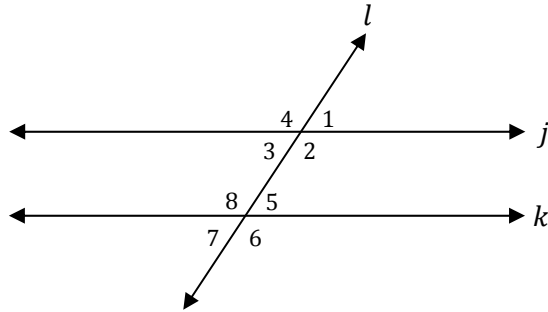
- O A. $(-3, -2)$
- O B. $(9, -2)$
- O C. $(-9, -2)$
- O D. $(-3, 2)$

Answer: A

Completion Items

Sample item for performance expectation 8.2.B

Line j and line k are parallel. Line l is a transversal. The measure of angle 4 is 125° .



Determine the measure of the angle 7.

Write your answer on the line.

What is the measure of angle 7? _____ $^\circ$ (degrees)

Answer: 55

Sample item for performance expectation 8.1.D

The equation shown represents a linear function.

$$x - 4y = 8$$

Determine the slope of the line that represents the function.

Write your answer on the line.

What is the slope of the line that represents the function? _____

Answer: $\frac{1}{4}$, 0.25, or equivalent

Short-Answer Item

Sample item for performance expectation 8.1.F - Taken from High School Practice Test, #27

The Acme Recycling Company has three salary options for its part-time summer employees. The total money earned is related to the amount of cans recycled and an optional hourly wage.

- Option 1: 25¢ a can plus \$1.00 an hour**
- Option 2: 5¢ a can plus \$5.00 an hour**
- Option 3: 40¢ a can and no hourly wage**

Jamal wrote an equation for each salary option to see what he could make per hour.

- Option 1: $y = 0.25x + 1.00$**
- Option 2: $y = 0.05x + 5.00$**
- Option 3: $y = 0.40x$**

Jamal estimates that he can recycle a minimum of 20 cans per hour.

Based on these equations and Jamal’s estimate, which option will allow Jamal to make the most money?

Show your work to support your answer using words, numbers, and/or diagrams.

Which option allows Jamal to make the most money? _____

Rubric and sample papers are included with the High School Practice Test online.

The Common Core Standards Initiative

Washington is among the majority of states and territories — 48 states, two territories and the District of Columbia — that joined the [Common Core Standards Initiative](#). As a member of this initiative, Washington State was able to review and provide comment on many drafts of the Common Core State Standards (CCSS) prior to their release on June 2, 2010.

In July 2010, with earlier authorization from the Washington State Legislature, Superintendent Dorn provisionally adopted the CCSS ([E2SSB 6696](#)). The next step in the process is to **submit a report to the Legislature** (January 2011) that includes a thorough comparison between Washington’s learning standards and the Common Core State Standards, a proposed timeline for implementation — state and district level — and related costs. Superintendent Dorn will be able to adopt the new standards after the 2011 legislative session, unless directed otherwise by the Legislature.

Compare & Review with Washington State Standards

OSPI has convened a highly-qualified workgroup to review drafts of the standards and conduct a comprehensive comparison of the common core standards with Washington’s current academic standards. The team comprises K-12 educators who are deeply familiar with our existing standards, state education associations and other K-12 sector stakeholders.

The workgroup will gather input and crosswalk our existing state standards with the common core standards for English language arts and mathematics. This analysis will make it possible to determine the support school districts will need as they implement the new standards.

Adoption & Implementation

Since state assessments will not change until the 2014-2015 school year, districts do not need to complete transition to common core standards until that time. Existing state standards will remain in effect until then. State assessments for the new standards will begin in the 2014-15 school year. A draft timeline for approval can be accessed online: <http://www.k12.wa.us/corestandards/Timeline.aspx>. Educators, families and the community can remain confident that existing state standards are academically strong and already aligned with national trends in K-12 education.

SMARTER Balanced Assessment Consortium

The 31-state [SMARTER Balanced Assessment Consortium](#), or SBAC, was awarded a four-year \$160 million Race to the Top assessment grant by the US Department of Education to develop a student assessment system aligned to a common core of academic standards. Washington is the applicant state for the consortium.

SBAC will create state-of-the-art adaptive online exams using “open source” technology. The online system will provide accurate assessment information to teachers and others on the progress of all students, including those with disabilities, English language learners and low- and high-performing students. The system will include:

- 1) the required summative exams (offered twice each school year);
- 2) optional formative, or benchmark, exams; and
- 3) a variety of tools, processes and practices that teachers may use in planning and implementing informal, ongoing assessment. This will assist teachers in understanding what students are and are not learning on a daily basis so they can adjust instruction accordingly.

SBAC’s assessment system will be tied to the [Common Core State Standards](#). By the end of 2011, states in the consortium must agree to adopt the Common Core State Standards in English language arts and mathematics. States still in the consortium in 2014-15 must agree to use the consortium’s tests as their accountability assessments.

The SBAC tests will measure the full range of the common core standards in grades 3-8 and 11, including assessing problem solving and complex thinking skills. Teachers in participating states will be involved at all stages of item and test development, including writing, scoring and the design of reporting systems. Educators will also be able to access a reporting system that identifies each student’s strengths, weakness and progress toward college and career readiness.

Access the entire press release at:

<http://www.k12.wa.us/Communications/PressReleases2010/RTTTAssessmentGrant.aspx>

Resources/Contact Information

[Sign-up now for Movers and Shakers!](#)

Receive pertinent mathematics assessment information and updates, meeting and workshop opportunities, and other mathematics notices on the Movers and Shakers email distribution list. To join, please send a request to felecia.mckinney@k12.wa.us.

Mathematics Webpage:

<http://www.k12.wa.us/mathematics/>

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