

Port Angeles School District
Mathematics Curriculum Committee 2010-11 Report
District-Wide Math Program Recommendations for 2011-12
July 11, 2011

EXECUTIVE SUMMARY

The Port Angeles School District Math Curriculum Committee was convened again in the fall of 2010. This group met throughout the 2010-11 school year. The committee understands that the intended, enacted and assessed curriculum must be aligned, and this report describes how it is working toward that end for the K-12 system.

The context for the work this group must accomplish is rapidly changing. The state and national expectations for math instruction and its requisite student achievement levels continue to increase. World-wide, United States students consistently under perform in comparison to their counterparts in many other countries. This is particular true in the higher grades. Indeed, this past year the state legislature has modified the math graduation requirements yet again. These modifications inform high school math courses and professional development adjustments in math instruction. The new end of course math assessments required renewed focus on content specific targets in algebra and geometry for students in grades eight through ten at least.

The committee focused extensively on the high school curricular and assessment adjustments. With the advent of new state math standards and end of course assessments, the need to focus closely at this level is urgent. Given that these courses and the requisite success in them also are linked to the attainment of a high school diploma, support for these initiatives continues to deserve significant attention. With the cancellation of the Collection of Evidence options, the end of course exams take on a high stakes persona for students and staff. Further, the third year math requirement engenders significant attention as well.

The district has sustained strong performance in reading and writing over the last several years. Math continues to be a challenging content area at every grade level in the district. A concomitant challenge is not to lose students' gains in core literacy areas while enhancing the focus on mathematics. This will be particularly important in the coming year as we will be rolling out the newly approved comprehensive core reading curriculum in grades K-9 across the district. As the district has shifted professional development and instructional resources, the result must maintain success within literacy instruction. This will empower teachers to build on their successes.

At the elementary level, the committee recommends the continued support of the *Bridges* curriculum materials published by the Math Learning Center in Salem, Oregon. The committee reviewed the alignment of the *Bridges* materials to the newly revised state grade level expectations. The alignment appears superior to the alignment of other curriculum materials. The resource support and professional development are superior to other possible curriculum choices. Developed with initial support from the National Science Foundation, *Bridges* offers a unique blend of problem solving and skill building in a clearly articulated program that moves through each grade level with common models, teaching strategies, and objectives. Even with the new math standards at the state level, the correlation of the curriculum materials is excellent. The Math Learning Center continues to dynamically adjust the materials to the new standards. Professional development has been ongoing in the use of the supplemental unit materials. Grade

level team meetings have focused on the new math standards and supplemental units. Student friendly math standards have been developed (see Appendix A) and continue to be used as a way to make instructional targets in math more transparent. These will also be used in parent communications, both at conference time and for reporting purposes. While the current elementary math curriculum materials seem to be serving their purpose, there is concern that at grades four and five the current materials do not provide sufficient work with algorithms. A focus for the upcoming year will be to look at the possibility of piloting something for these two grade bands.

At the middle level, the McDougal Littell curriculum materials are also recommended for continued support. The committee reviewed the alignment of the McDougal Littell curriculum materials to the current state grade level expectations. Parent and technology support materials are excellent. The McDougal Littell materials transition nicely from the *Bridges* materials at grades K-5 to the newly adopted Holt texts at the high school. There is a blend of application and computation in the approach and an appropriate emphasis on algorithms. Curriculum adoption specialists were able to work with staff to review the new state standards and test maps as they connected to internal assessments. The assessments for these grade levels were re-worked and implemented during the current year. A discussion item for the upcoming year will be the best curricular options for the general math eighth grade classes. As these students will be transitioning to the high school for an end of course Algebra 1 exam, they require a strong algebra preparation. Currently, the plan recommended is to increase the number of students in the pre-algebra courses at seventh grade and subsequently have all eighth grade students in an algebra course by eighth grade. Even if these students need to repeat the algebra content in grade nine, they will have a strong algebra content experience at grade eight. This will continue to be reviewed in the coming year.

At the high school level, restructuring was undertaken once again to align with newly revised state expectations. At the state level, segmented mathematics was eliminated several years ago. We did offer a statistics course in its place (see Appendix G). The end-of-course exams have now replaced the math HSPE. The math committee revised and reviewed the new benchmark tests to reflect end of the year exams. We will continue to offer algebra and geometry with both one hour and two hour lecture/lab courses to prepare students for the new state exams. Early data results on internal assessments show the two hour students performed as well as the one hour course students. The high school math department continues to seek new and innovative ways to meet student needs and continue to modify the course maps to explain these options (see Appendix G and H). As passing a state math assessment(s) again becomes a graduation requirement, the collection of evidence option likely will return again. The staff are preparing for this possibility as our students have had tremendous success with this model in the past.

A year ago, the committee recommended to the Instructional Materials Committee the selection of Holt as the publisher for the new high school texts. These are also the texts most highly recommended by the state in its recent recommendations for course matches in Algebra and Geometry. This second year of implementation has been successful as the instructional calendars are being reviewed and revised for the upcoming year. The high school math staff is looking forward to the state releasing more test items for the end of course exams. The staff has also written and end-of-course practice test which was administered in late May to assess readiness for the state assessment. Re-teaching and discussion occurred following this test administration. These test results will be looked at in light of the data returned on the state assessments for students in

August. This internal assessment and the mid-year benchmark assessment may need revision when we do the data match.

As seniors at the high school level must yet continue to take and pass math courses if they have not passed the state math assessment, the course proposed to fit this bill for seniors will continue to be Statistics. The committee reviewed this rationale and reviewed texts for use in this course. A text was selected and forwarded to the Instructional Materials Committee for the regular course. The text for the AP Statistics course was selected and piloted following the summer AP conference. This book has continued to be in use in the AP Statistics classes. Similarly, the piloted text for the regular Statistics course was also recommended for approval and continues to be in use. High school math department teachers attended the Pre-AP conference this summer. The math department will be utilizing the information they gleaned in upcoming conversations. A unique strategy utilized at the conference involved taking an AP test item and breaking down the skills necessary to solve the item in a vertical course manner. In other words, what skills are required to solve the problem and in what courses do students learn these skills. This will be a valuable conversation in the coming year to have at the district committee table.

The third year math requirement is one that continues to merit discussion in the coming year. The State Board of Education (SBE) amended the graduation requirements rule (WAC 180-51-066) to add a third credit of math and prescribed the content of these credits. This rule was adopted in 2008 and is in effect for the graduating class of 2013. Multiple courses have been recognized as math elective equivalent courses; however, not all of these are perceived to meet the intent of the third year math course requirement. The algebra trigonometry course generally referred to as the third year math course is in some nature the standard as we look at options to satisfy this requirement. The SBE intends that the third year course is “a rigorous high school level math course”. In other words, not any math course meets this standard. Guidance from the SBE includes the note that “courses in which the majority of the math is at a K-8 level would not qualify for the third credit.”

The SBE also implemented a new process for students wishing to take a third year course other than Algebra 2. This process requires a meeting with the student, parent and high school representative and a form (see Appendix F) must be signed and documented in the permanent student file. This process is intended by the SBE to be a personalized process. This is an important step as Algebra 2 has long been considered a ‘gateway course’ to higher education and training. This topic will continue to receive significant oversight in the coming year.

Overall, it is of some assistance to consider the district math curriculum approach as *balanced numeracy*. In other words, there is a balance between knowledge and understanding; computation and algorithms; and conceptual application of the computation and algorithms. Math fluency is still recognized as being critical to math success, as is math comprehension. The Math Curriculum Committee continues to clarify this balance and the many ways in which blending these components is believed to be the most powerful choice for students’ success in math.

Appendices to this report are:

- Appendix A, I CAN Math Standards K - 6
- Appendix B, Holt Algebra Alignment
- Appendix C, Holt Geometry Alignment
- Appendix D, Algebra Calendar

Appendix E, Geometry Calendar
Appendix F, Third Credit of Math
Appendix G, Curriculum Map Extended
Appendix H, Curriculum Map Condensed

MATH COMMITTEE MEMBERSHIP

The staff members listed below comprises the Math Curriculum Committee membership for the 2010-11 school year. These members represent every school in the district, including the kindergarten program and the special education department. Classroom teachers, support teachers, and administrators began this work last spring and continued collaborating regularly to produce this report. In essence, this is the district vertical team for math as the committee comprises staff from elementary, middle and high school grade spans. This vertical team and curriculum planning is necessary to develop and sustain a coherent instructional focus for students in the district

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| 1. Jody Adams | 8. Anna Lee |
| 2. Michelle Devlin | 9. Lisa Lisk |
| 3. Loren Engel | 10. Peter Alexander |
| 4. Teresa Haller | 11. Bruce Rothweiler |
| 5. Hester Hill | 12. Theresa Schmid |
| 6. Carol Jackson | 13. Freda Tallmadge |
| 7. Kelsey Kenck | 14. Michelle Reid |

BACKGROUND

As our nation and state have experienced higher accountability for student achievement outcomes, districts everywhere have been challenged to have clearer and more focused curriculum. Also, our country seems to be facing a continued challenge to our performance level in math and science. The STEM movement will be one that we as a committee will need to be tracking in the coming year(s). In districts around the country, the elementary math curriculum must mesh with the middle school curriculum and subsequently the high school curriculum. As districts struggle to develop and implement internal curricular targets that match external and internal accountability structures, there are pressure points which come to bear on the system. Limited time, fiscal resources, technology, information-sharing structures, availability of quality assessments, shared assessment understanding and expertise, and clear curricular targets all combine to impose significant pressure on systems already under stress.

The current math graduation requirements for the classes of 2010 through 2014 include the continuation of math coursework into the junior and senior years until demonstrated progress on the math HSPE/end of course assessments meet standard. This necessitates the need for junior and senior math courses aligned to the state grade level expectations (see Appendix G and H). With high expectations must come high support.

During this current academic year, the new Algebra/Trig text was in its second year of implementation. New staff was also integrated into this instructional calendar. This text will be integral in the development of the coursework designed for the newly required third year math requirement. This book has presented some challenges; but, overall is meeting the instructional

needs of this course. The instructional calendar for this course is being developed and refined for this course. The algebra and geometry courses have also had alignment work done this year (see Appendix B and C). The AP Statistics and regular Statistics texts have also been successfully implemented and revised in the current year. All of these changing math requirements clearly underscore a need for more and varied math sections in the high school master schedule. The new state math end of course requirements will also have significant impact on the course offerings at the high school level.

One way in which our district is choosing to meet these morphing requirements for students is by using the credit equivalency policy to cross credit several of the Career and Technical Education courses for mathematics identified as junior and senior level math elective courses. Several of these courses received approvals during the past year. The next step for this work will be the distinguishing of courses for third course approval.

PARAMETERS

The Math Curriculum Committee understands it is working within a time in which fiscal considerations constrain the district's capacity to purchase new materials. The committee is sensitive to these constraints. Given these constraints, and the current structure of the K-12 math curriculum, the committee continues to be charged with identifying an aligned curriculum and professional development support for the use of these materials. The following committee responsibilities include:

- Review the math curriculum currently in place.
- Review and recommend curriculum adjustments where grade levels conflict or are silent.
- Review best practice research with regard to math instruction.
- Review math materials and research alignment of these materials.
- Recommend new materials where necessary to meet the alignment needs of our students and teachers in the area of mathematics.
- Make recommendations for appropriate professional development that would support the effective implementation of these curriculum materials.
- Define our district beliefs about math instruction.
- Complete the district-wide instructional calendar for mathematics; examine how we block instructional time for math instruction.
- Establish expectations for systemic remediation programs in mathematics.
- Recognize time is of the essence, needing both a mid-year and end of year report next year.
- Determine most effective ways to garner teacher buy-in for new strategies and training.
- Determine strategies to manage all the manipulatives and materials with more investigative math instruction.
- Determine better time use after the MSP and HSPE tests in the spring.

The committee was charged to work on these responsibilities and make its recommendations during 2010-11. The committee will continue its work as new recommendations are implemented over the next several years in order to gain a high level of support for the new expectations outlined later in this report and other updates in the new academic year.

Finally, three major tenets frame our work at the district level. These are: 1) we live and work in a standards-based environment; 2) there must be equity across the system for students and staff; and 3) coherence is necessary throughout a student's experience in the Port Angeles School District.

PROCESS

The committee was convened again in the winter of the 2010-11 academic year. Our first order of business was to understand the current issues and concerns of school staffs with regard to the math curriculum and the new state math standards. Until four years ago, the math curriculum lacked a coherent focus, adequate resources and effective levels of professional development. The factors leading to the concerns were examined and addressed. Barriers to the program desired were identified and addressed. The committee generated a number of topics requiring resolution to successfully meet the district's math instructional challenges. These are consistently and relentlessly being worked on.

The Math Curriculum Committee met monthly during the 2010-11 academic year. As the math curriculum materials are implemented, the committee continues to provide oversight to the implementation and professional development necessary for teachers to effectively incorporate the materials into their classroom practice. Curriculum adoption specialists continue to be instrumental in the professional development for the math curriculum materials.

The Math Curriculum Committee continues to engage in a review of research and literature regarding math curriculum and instructional strategies. Further, this year, the committee spent a significant amount of time reviewing and integrating the new state standards into the enacted curriculum. A substantial next body of work for the committee is the remediation support and strategies for mathematics in the classroom and across the school and district. The current approach to this topic is fragmented at best and not as effective as it must be. The committee has taken a fresh new look at this challenge.

MATH COMMITTEE RECOMMENDATIONS

Elementary Level

Bridges is an element of a coherent K-12 program. It aligns not only with state standards, but also prepares students for what they will experience in middle and high school. *Bridges* has a good balance of concepts and understanding. It also contains a very strong computation strand and reinforces algorithms when developmentally appropriate. Math fact fluency work still remains an aspect of the curriculum requiring support, particularly in grades four and five. The committee will be looking at other curriculum choices for grades four and five in the coming year.

The number corner component of the curriculum is demonstrating strong mathematical thinking at all grade levels. It is also the paramount core curriculum component for inclusion for students with a pull out math support plan in place. The Response to Intervention program at the elementary level will be studied in the content area of math in the upcoming year.

Math remained a significant focus of grade level team meeting time. The curriculum adoption specialists also provided strong support in the content area of math. Supplemental and replacement units were provided by the Math Learning Center and were integrated into the instructional calendar. Assessments have been collaboratively written to align with report card reporting timelines. The new math standards have been re-written in kid friendly language (see Appendix A) so that these standards can be more effectively used as targets in the classroom for students. These new documents are also available for use in communicating to parents the math expectations for their elementary student(s).

Another interesting topic the committee wrestled with was the challenge of making sure all students master their basic math facts in a timely manner. This is necessary to ensure that math fluency is present as this is a must for successfully navigating application problems. A proposal for the tracking of basic fact expectations continues to be developed and approved for pilot use next year in all of the elementary schools. Franklin was the school much of the fine tuning work was done in this year. This would create a systemic method of recording basic fact work across the district and be consistent with the new Washington State math performance expectations.

The committee proposes the implementation of a math fact remediation program for the district to be used in all elementary schools in the coming year. This is a remediation plan involving trained volunteers working with young students who have not yet mastered their basic math facts. This is planned as a support for classroom teachers and students. The project outlines a plan for tracking, monitoring and intervening with students who are struggling with their basic math facts. Forms to track this project work will be utilized in this project. As all schools will be involved, students who move between schools in the district will have a more coherent approach to this critical math skill set.

Middle School Level

At the middle level, the committee reviewed the McDougal Littell text and materials and their alignment to the newly revised state math standards. The materials continue to be a nice match for the current standards. When these materials were selected, they were matched to the NCTM math standards which are more represented in the new state math standards.

The publisher provided supplemental professional development and new assessment technology support during the past year. This has resulted in more flexible use of the core curriculum and enhanced differentiation of the core math curriculum. While most classes using these texts utilize the mid track of the text, the staff is becoming more familiar with differentiation strategies for the students at different levels in their classes.

Mid-year assessments and benchmark assessments were refined during this past year. At this time, the collaboratively discussed changes to the benchmark assessments have been written and planned for review following the MSP data release in the coming months.

Placement math assessments were refined for the incoming seventh graders to ensure students are accurately placed in the math class they need to be in when the academic year begins. These

placement tests have been placed at the beginning of the seventh grade year at the request of the middle school math teachers.

Another topic looked at closely at the middle level was the eighth grade general math course text. As the high school ninth grade end of course exam is the Algebra 1 test, the staff is looking at beefing up the algebra content in the eighth grade course. Currently, the middle school math teachers are working to have all eighth grade students in an algebra course in the coming year. This preparation is a rigorous step taken with the understanding that all seventh graders will need to be in a pre-algebra type course in seventh grade.

High School Level

Two years ago, the high school piloted new texts for AP Calculus, Honors Math Analysis and Honors Geometry. These texts were subsequently reviewed both by the high school math department and by the committee as to their impact on student learning. The AP Calculus and Honors Math Analysis texts were recommended for approval while the Honors Geometry text was replaced in favor of the Holt published text. These recommendations were consistent with state recommended texts. These texts and their instructional calendars were reviewed with new staff to these courses.

The high school math department also put forth recommendations to respond to the newly revised state math standards. These were reviewed by the district committee for articulation fidelity with the feeder school math curricula. The resultant recommendation of the committee was to recommend the Holt published Algebra 1, Geometry and Algebra II texts for use in the current year. Alignment of these texts in algebra and geometry to the new state standards was also worked on (see Appendix B and C). The Pre-Calculus text is a publisher match to the current AP Calculus text. All these texts were implemented during this current school year. High school math teachers at both high schools worked hard to develop instructional calendars for these courses with the new texts and standards. The instructional calendars (see Appendix D and Appendix E) will be reviewed in light of the data from students who recently took the HSPE math assessment.

Credit recovery was restructured to add time after school and during Advisory time at the high school. This enabled a record number of math credits to be recovered this past year. New benchmark tests were constructed for the 2010-2011 school year and have been reviewed and revised. Placement exams were developed and administered to incoming freshmen from Stevens Middle School and Queen of Angels schools to help with proper placement. A course curriculum map was developed for course selection clarification (see Appendix D).

Clearly, as our ability to compete in the ever flattening global economy continues to be challenging, math knowledge and understanding consistently is a requisite skill set. The international assessment report, the TIMMS report, made several clear observations regarding the strengths of math instruction and student math achievement in countries around the world. The third year math requirement is being implemented for the class of 2013 and beyond. Several CTE courses have been granted math credit equivalency to assist with math graduation requirement flexibility. A math lab is also being studied for implementation. This topic is one where the discussion

about rigorous requirements again comes into play. The balance between high expectations and high support must continue to be front and center in our deliberations. There is yet much work to do.

Appendix A

Washington State, I CAN DO STANDARDS

Washington State
I CAN DO STANDARDS
Kindergarten Grade Mathematics

Performance Expectation K.1 Core Content: Whole numbers (Numbers, Operations)

- K.1 A I can count by ones forward to 100.
I can count backwards from any number between 10 and 1.
- K.1 B I can read aloud numerals from 0 to 31.
- K.1 C I can understand how to put numbers together up to 5.
I can understand how to take numbers apart from 5.
- K.1 D I can order numerals from 1 to 10.
- K.1 E I can count a set of objects up to 20.
I can count out up to 20 objects from a larger set.
- K.1 F I can compare two sets of up to 10 objects each and say whether the number of objects in one set is equal to, greater than, or less than the number of objects in the other set.
- K.1 G I can find numbers from 1 to 31 on the number line.
- K.1 H I can describe a number from 1 to 9 using 5 as a benchmark number.

Performance Expectation K.2 Core Content: Patterns and Operations (Operations, Algebra)

- K.1 A I can copy a pattern.
I can add what comes next in a pattern.
I can create a pattern.
I can tell about a pattern.
- K.1 B I can explain a pattern in different ways using things like sounds, colors, movements, or letters.
- K.1 C I can show how to add up to 10 or fewer by joining sets of objects.
I can show how to subtract 10 or fewer by separating the objects.
- K.1 D I can tell a story about putting sets of things together or taking them apart using words, pictures, objects or numbers.

Performance Expectation K.3 Core Content: Objects and their locations (Geometry/Masurement)

- K.3 A I can name shapes. (such as square, etc.)
I can describe shapes. (such as square, etc.)
- K.3 B I can sort shapes using a sorting rule.
I can explain the sorting rule.
- K.3 C I can describe the location of an object, using words (such as in, out, under, etc.)

Performance Expectation K.4 Additional Key Content (Geometry/Masurement)

- K.4 A I can sort or compare objects by how long they are, how much they weigh, and how much they hold.

Appendix A, cont.

Performance Expectation K.5 Core Processes: Reasoning, problem solving, and communication

- K.5 A I can find the question(s) asked in a problem.
- K.5 B I can find the important information I need to solve a problem.
- K.5 C I can tell if I need more information to solve a problem.
- K.5 D I can use a strategy to solve a problem.
- K.5 E I can answer the question(s) asked in a problem.
- K.5 F I can explain how to solve a problem
- K.5 G I can tell if the answer makes sense.

Appendix A, cont.

Washington State
I CAN DO STANDARDS
First Grade Mathematics

Performance Expectation 1.1 Core Content: Whole Number Relationships
(Numbers, Operations)

- 1.1 A I can count by ones forward and backward from 1 to 120, starting at any number.
I can count by twos, fives and tens to 100.
- 1.1 B I can name the number that is one less or one more than any number given verbally up to 120.
- 1.1 C I can read aloud numerals from 0 to 1,000.
- 1.1 D I can use words to tell what place something is in, like first, second, etc.
- 1.1 E I can write numbers up to 120.
I can compare numbers up to 120.
I can order numbers up to 120.
- 1.1 F I can combine or take apart numbers to 10.
- 1.1 G I can group numbers into tens and ones in more than one way.
- 1.1 H I can group objects by fives, tens, and twos.
I can count objects by fives, tens, and twos.
- 1.1 I I can tell if a number is odd or even.
I can show how I know if a number is odd or even.

Performance Expectation 1.2 Core Content: Addition and Subtraction
(Operations, Algebra)

- 1.2 A I can use math tools and or pictures to match addition and subtractions equations.
- 1.2 B I can use the equal sign (=) and the word “equals” correctly.
- 1.2 C I can show addition and subtraction on the number line.
- 1.2 D I can show how + and – are alike by undoing an addition problem.
(Example $3 + 5 = 8$ so $8 - 5 = 3$)
- 1.2 E I can add three or more numbers in different orders.
- 1.2 F I can explain the strategies I use to solve addition and subtraction facts to 18.
- 1.2 G I can quickly do addition facts to 10.
I can quickly do subtraction facts from 10.
- 1.2 H I can solve addition and subtraction word problems.
I can create addition and subtraction word problems.
- 1.2 I I can recognize number patterns.
I can extend number patterns.
I can create number patterns.

Appendix A, cont.**Performance Expectation 1.3 Core Content: Geometric Attributes**
(Geometry/Measurement)

- 1.3 A I can sort 2-D and 3-D shapes.
I can compare 2-D and 3-D shapes.
- 1.3 B I can identify and name shapes.
- 1.3 C I can combine shapes to make new shapes.
I can divide shapes into other shapes.

Performance Expectation 1.4 Core Content: Concepts of Measurement
(Geometry/Measurement)

- 1.4 A I know that I need to use the same sized objects when I measure the length, weight or capacity of something.
- 1.4 B I can measure the length of things using non-standard units.
(Example: paper clips, toothpicks, etc.)
- 1.4 C I can compare one thing to another.
(Example: If Bob is taller than Tim and Tim is taller than Mary, then Bob is taller than Mary.)
- 1.4 D I can measure the weight or capacity of things using non-standard units.
(Example: marbles for weight, paper cups for capacity)
- 1.4 E I can tell about the connection between the size of the measurement unit I use and the number of units I need.
- 1.4 F I can name the days of the week.
I can name the months of the year.
I can show how to find a day or month on a calendar.

Performance Expectation 1.5 Additional Key Content: Data/Statistics/Probability

- 1..5 A I can show data with tallies.
I can show data with tables.
I can show data with picture graphs.
I can show data with bar-type graphs.
- 1..5 B I can ask questions comparing data.
I can answer questions comparing data.

Appendix A, cont.

Performance Expectation 1.6 Core Processes: Reasoning, Problem Solving and Communication

- 1.6 A I can find the question asked in a problem.
- 1.6 B I can find the question asked in a problem.
- 1.6 C I can recognize when more information is needed to solve a problem.
- 1.6 D I can choose from many strategies and use one or more to solve a problem.
- 1.6 E I can answer the question(s) asked in a problem.
- 1.6 F I can show the answer(s) to the question(s) in a problem.
- 1.6 G I can describe how a problem was solved using pictures, numbers or words.
- 1.6 H I can decide whether a solution to a problem is reasonable.

Appendix A, cont.

Washington State
I CAN DO STANDARDS
Second Grade Mathematics

Performance Expectation 2.1 Core Content: Place Value and the Base 10 System
(Numbers)

- 2.1 A I can count by tens or hundreds forward and backward from 1 to 1000 starting at any number.
- 2.1 B I can match place value models with the numbers they represent to 1,000.
- 2.1 C I can find the ones, tens, and hundreds place in a number.
I can find digits in the ones, tens, and hundreds place.
- 2.1 D I can write three-digit numbers in expanded form.
Example: $234 = 200 + 30 + 4$
- 2.1 E I can group three-digit numbers into hundreds, tens, and ones in more than one way.
- 2.1 F I can compare and order numbers from 0 to 1,000.

Performance Expectation 2.2 Core Content: Addition and Subtraction (Operations, Geometry/ Measurement, Algebra)

- 2.2 A I can quickly recall addition facts and subtraction facts up to 20.
- 2.2 B I can solve addition and subtraction word problems that involve joining, separating, and comparing.
I can verify the answers.
- 2.2 C I can add and subtract two-digit numbers efficiently and accurately.
- 2.2 D I can use mental math to add and subtract two-digit numbers.
I can explain the strategies I used.
- 2.2 E I can estimate sums.
I can estimate differences.
- 2.2 F I can use addition to create a pattern.
I can tell the rule for the pattern I created.
I can extend the pattern.
- 2.2 G I can solve equations in which the unknown number appears in different positions.
- 2.2 H I can name each U.S. coin.
I can write each coin's value using the \$ sign and ¢ sign.
I can name combinations of other coins with the same total value.
- 2.2 I I can tell the value of a collection of coins totaling less than \$1.00.

Appendix A, cont.**Performance Expectation 2.3 Core Content:** Measurement (Geometry/Measurement)

- 2.3 A I can identify objects that represent or approximate standard units.
I can use them to measure length.
- 2.3 B I can estimate length using metric and U.S. customary units.
- 2.3 C I can measure length to the nearest whole unit in both metric and U.S. customary units. (Including inches, feet, yards, centimeters, meters.)
- 2.3 D I can compare the size of minutes, hours, days, weeks, months and years.
- 2.3 E I can read both analog and digital clocks to tell time to the minute.

Performance Expectation 2.4 Additional Key Content Numbers, Operations, Geometry/Measurement, Data/Statistics/Probability

- 2.4 A I can solve problems with 2-D and 3-D figures.
- 2.4 B I can collect, organize, show, and explain data in bar graphs and picture graphs.
- 2.4 C I can show and explain multiplication situations in which sets of equal size are shown.
- 2.4 D I can show and explain division situations in which sets are separated into equal parts.
- 2.4 E I can show that a fraction is a number of equal parts of a whole or a set.

Performance Expectation 2.5 Core Processes: Reasoning, Problem Solving and Communication

- 2.5 A I can find the question(s) asked in a problem.
- 2.5 B I can identify the information that can be used to solve a problem.
- 2.5 C I can recognize when more information is needed to solve a problem.
- 2.5 D I can choose from a variety of problem-solving strategies and use one or more strategies to solve a problem.
- 2.5 E I can show the answer(s) to the question(s) in a problem.
- 2.5 F I can describe how a problem was solved.
- 2.5 G I can decide whether a solution to a problem is reasonable.

Appendix A, cont.

Washington State
I CAN DO STANDARDS
Third Grade Mathematics

Performance Expectation 3.1 Core Content: Addition, Subtraction, Place Value (Numbers, Operations)

- 3.1A I can read, write, compare, order and represent numbers to 10,000 using numbers, words, and symbols.
- 3.1B I can round whole numbers through 10,000 to the nearest ten, hundred, and thousand.
- 3.1C I can fluently and accurately add whole numbers using the standard algorithm.
I can fluently and accurately subtract whole numbers using the standard algorithm.
- 3.1D I can estimate sums and differences to approximate solutions to problems.
I can tell if an answer makes sense.
- 3.1E I can solve single- and multi-step word problems involving addition and subtraction of whole numbers.
I can verify the answers.

Performance Expectation 3.2 Core Content: Concepts of Multiplication and Division (Operations, Algebra)

- 3.2A I can show multiplication as repeated addition, arrays, counting by multiples, and equal jumps on the number line.
I can write a related equation.
- 3.2B I can show division as equal sharing, repeated subtraction, equal jumps on the number line, and formation of equal groups of objects.
I can write a related equation.
- 3.2C I can show products, quotients, and missing factors by using the inverse relationships between multiplication and division.
I can use multiplication and division fact families.
- 3.2D I can apply and explain strategies to solve multiplication facts to 10 X 10 and the related division facts.
- 3.2E I can quickly recall multiplication facts for which one factor is 1, 2, 5, or 10 and the related division facts.
- 3.2F I can solve and create word problems that match multiplication and division problems.
- 3.2G I can multiply any number from 11 through 19 by a single-digit number using arrays and partial products.
- 3.2H I can solve single- and multi-step word problems involving multiplication and division.
- 3.2H I can verify the answers.

Appendix A, cont.**Performance Expectation 3.3 Core Content:** Fraction Concepts (Numbers, Algebra)

- 3.3 A I can show fractions that have denominators of 2, 3, 4, 5, 6, 8, 9, 10 and 12 as parts of a whole, parts of a set, and points on a number line.
- 3.3 B I can compare fractions that have denominators of 2, 3, 4, 5, 6, 8, 9, 10 and 12.
I can order fractions that have denominators of 2, 3, 4, 5, 6, 8, 9, 10 and 12.
- 3.3 C I can show equivalent fractions with denominators of 2, 3, 4, 5, 6, 8, 9, 10, and 12.
I can identify equivalent fractions with denominators of 2, 3, 4, 5, 6, 8, 9, 10, and 12.
- 3.3 D I can solve single- and multi-step word problems that compare fractions.
I can verify the answers.

Performance Expectation 3.4 Core Content: Geometry (Geometry/Measurement)

- 3.4 A I can identify and sketch parallel, intersecting, and perpendicular lines and line segments.
- 3.4 B I can identify and sketch right angles.
- 3.4 C I can identify and describe special types of quadrilaterals. (These include squares, rectangles, kites, parallelograms, rhombi, and trapezoids.)
- 3.4 D I can measure and calculate the perimeters of quadrilaterals.
- 3.4 E I can solve single- and multi-step word problems about perimeters of quadrilaterals.
I can verify the answers.

Performance Expectation 3.5 Additional Key Content (Algebra, Geometry/Measurement, Data/Statistics/Probability)

- 3.5 A I can determine whether two expressions are equal and use “=” to show equality.
- 3.5 B I can measure temperature in degrees Fahrenheit and degrees Celsius using a thermometer.
- 3.5 C I can estimate, measure and compare weight and mass using U.S. customary units and metric units.
- 3.5 D I can estimate, measure, and compare capacity using U.S. customary and metric units.
- 3.5 E I can construct and understand pictographs, frequency tables, line plots, and bar graphs.

Performance Expectation 3.6 Core Processes: Reasoning, Problem Solving, and Communication

- 3.6 A I can understand the question(s) to be answered in a problem.
- 3.6 B I can find the information that is given in a problem and decide whether it is necessary or unnecessary to solve the problem.
- 3.6 C I can identify missing information that is needed to solve a problem.
- 3.6 D I can decide whether a problem is similar to problems that I have solved before.
- 3.6 D I can explain possible strategies to solve the problem.
- 3.6 E I can select and use one or more appropriate strategies to solve a problem.
- 3.6 F I can represent a problem using words, numbers, pictures, physical objects or symbols.
- 3.6 G I can explain why I used a specific problem-solving strategy to solve a problem.
- 3.6 H I can tell whether a solution is reasonable, mathematically correct and answers the question.

Appendix A, cont.

- 3.6 I I can summarize mathematical information, draw conclusions, and explain my reasons.
- 3.6 J I can make and try out conjectures based on data (or information) collected from explorations and experiments. (A conjecture is an opinion based on incomplete information.)

Appendix A, cont.

Washington State
I CAN DO STANDARDS
Fourth Grade Mathematics

Performance Expectation 4.1 Core Content: Multi-digit multiplication (Numbers, Operations, Algebra)

- 4.1 A I can quickly recall multiplication facts through 10 X 10 and the related division facts.
- 4.1 B I can identify factors and multiples of a number.
- 4.1 C I can show how to multiply a two-digit number by a two-digit number with place value models.
- 4.1 D I can multiply by 10, 100, and 1000.
- 4.1 E I can compare the values represented by digits in whole numbers using place value.
- 4.1 F I can fluently and accurately multiply up to a three-digit number by one- and two-digit numbers using the standard multiplication algorithm.
- 4.1 G I can mentally multiply two-digit numbers by numbers through 10 and by multiples of 10.
- 4.1 H I can estimate products to approximate answers to problems.
- 4.1 H I can determine if the answer is reasonable.
- 4.1 I I can solve single- and multi-step word problems involving multi-digit multiplication.
- 4.1 I I can verify the solution.
- 4.1 J I can solve single- and multi-step word problems involving division.
- 4.1 J I can verify the answers.

Performance Expectation 4.2 Core Content: Fractions, decimals and mixed numbers (Numbers, Algebra)

- 4.2 A I can represent decimals through hundredths with place value models, fraction equivalents, and the number line.
- 4.2 B I can read, write, compare, and order decimals through hundredths.
- 4.2 C I can convert a mixed number to a fraction.
- 4.2 C I can convert a fraction to a mixed number.
- 4.2 C I can visually represent the number.
- 4.2 D I can convert a decimal to a fraction.
- 4.2 D I can convert a fraction to a decimal.
- 4.2 D I can visually represent the number.
- 4.2 E I can compare and order decimals and fractions (including mixed numbers) on the number line, lists and use the symbols $<$, $>$, or $=$.
- 4.2 F I can write a fraction equivalent to a given fraction.
- 4.2 G I can simplify fractions using common factors.
- 4.2 H I can round fractions to the nearest whole number.
- 4.2 H I can round decimals to the nearest whole number.

Appendix A, cont.

- 4.2 I I can solve single- and multi-step word problems involving comparison of Decimals and fractions (including mixed numbers).
 4.2 I I can verify the answers.

Performance Expectation 4.3 Core Content: Concept of Area (Geometry/Measurement, Algebra)

- 4.3 A I can explain whether two-dimensional figures are congruent.
 4.3 B I can find the approximate area of a figure using square units.
 4.3 C I can figure out the perimeter and area of a rectangle using formulas. I can explain why the formula works.
 4.3 D I can figure out the areas of figures that can be broken into rectangles.
 4.3 E I can show that rectangles with the same area can have different perimeters, and that rectangles with the same perimeter can have different areas.
 4.3 F I can solve single- and multi-step problems involving perimeters and areas of rectangles. I can verify the answers.

Performance Expectation 4.4 Additional Key Content: Geometry/Measurement, Algebra, Data/Statistics/Probability

- 4.4 A I can represent an unknown quantity in simple expressions, equations, and inequalities using letters, boxes, and other symbols.
 4.4 B I can solve single- and multi-step problems involving familiar unit conversions, including time, within either the U.S. customary or metric system.
 4.4 C I can estimate and determine elapsed time using a calendar, a digital clock, and an analog clock.
 4.4 D I can graph and identify points in the first quadrant of the coordinate plane using ordered pairs.
 4.4 E I can determine the median, mode, and range of a set of data and describe what each of those means.
 4.4 F I can describe and compare the likelihood that something will happen.
 4.4 G I can figure out a simple probability from a problem that includes a picture.
 4.4 H I can display the results of probability experiments and interpret the results.

Performance Expectation 4.5 Core Processes Reasoning, Problem Solving, and Communication

- 4.5 A I can determine the question(s) to be answered given a problem situation.
 4.5 B I can identify information that is given in a problem and decide whether it is important or necessary to solve the problem.
 4.5 C I can identify missing information that is needed to solve a problem.
 4.5 D I can determine whether a problem is similar to previously solved problems. I can identify possible strategies for solving the problem.
 4.5 E I can select and use one or more appropriate strategies to solve a problem. I can explain why I chose a strategy.

Appendix A, cont.

- 4.5 F I can represent a problem using words, numbers, pictures, physical objects, or symbols.
- 4.5 G I can explain why I used a specific problem-solving strategy to solve a problem.
- 4.5 H I can analyze and evaluate whether an answer is reasonable, is mathematically correct, and answers the question.
- 4.5 I I can summarize mathematical information, draw conclusions, and explain my reasoning.
- 4.5 J I can make and try out conjectures based on data (or information) collected from explorations and experiments. (A conjecture is an opinion based on incomplete information).

Appendix A, cont.

Washington State
I CAN DO STANDARDS
Fifth Grade Mathematics

Performance Expectation 5.1 Core Content: Multi-digit Division (Operations, Algebra)

- 5.1 A I can represent multi-digit division using place value models and connect the representation to the related equation.
- 5.1 B I can determine quotients for multiples of 10 and 100 by using what I know about place value and properties of operations.
- 5.1 C I can fluently and accurately divide up to a four-digit number by one- or two-digit divisors using the standard long-division algorithm.
- 5.1 D In problems with one- or two-digit divisors, I can estimate quotients to find a reasonable answer.
- 5.1 E I can mentally divide two-digit numbers by one-digit divisors and explain the strategy I used.
- 5.1 F I can solve single- and multi-step word problems involving multi-digit division.
- 5.1 G I can verify the answers.

Performance Expectation 5.2 Core Content: Addition and Subtraction of Fractions and Decimals (Numbers, Operations, Algebra)

- 5.2 A I can represent addition and subtraction of fractions and mixed numbers using visual and numerical models.
I can connect the representation to the related equation.
- 5.2 B I can represent addition and subtraction of decimals using place value models.
I can connect the representation to the related equation.
- 5.2 C Given two fractions with unlike denominators, I can rewrite the fractions with a common denominator.
- 5.2 D I can determine the greatest common factor and the least common multiple of two or more whole numbers.
- 5.2 E I can fluently and accurately add and subtract fractions, including mixed numbers.
- 5.2 F I can fluently and accurately add and subtract decimals.
- 5.2 G I can estimate sums and differences of fractions, mixed numbers, and decimals and determine if the answer is reasonable.
- 5.2 H I can solve single- and multi-step word problems involving addition and subtraction of whole numbers, fractions (including mixed numbers), and decimals.
I can verify the answers.

Appendix A, cont.

Performance Expectation 5.3 Core Content: Triangles and Quadrilaterals (Geometry/Measurement, Algebra)

- 5.3 A I can classify quadrilaterals. (This includes parallelograms, kites, squares, rhombi, trapezoids and rectangles.)
- 5.3 B I can identify, sketch, and measure acute, right, and obtuse angles.
- 5.3 C I can identify, describe and classify acute, right, or obtuse triangles.
I can identify, describe and classify scalene, isosceles, or equilateral triangles.
- 5.3 D I can figure out the formula for the area of a parallelogram by relating it to the area of a rectangle.
- 5.3 E I can figure out the formula for the area of a triangle by relating it to the area of a parallelogram.
- 5.3 F I can figure out perimeters and areas of triangles and parallelograms.
- 5.3 G I can draw quadrilaterals and triangles from given information about sides and angles.
- 5.3 H I can identify the number and location of lines of symmetry in triangles and quadrilaterals.
- 5.3 I I can solve single-and multi-step word problems about the perimeters and areas
I can verify the answers.

Performance Expectation 5.4 Core Content: Representation of Algebraic Relationships (Operations, Algebra, Geometry/Measurement)

- 5.4 A I can describe and create a rule for numerical and geometric patterns.
I can extend the patterns.
- 5.4 B I can write a rule to describe the relationship between two sets of data that are linearly related.
- 5.4 C I can write algebraic expressions that represent simple situations.
I can evaluate the expressions, using substitution when variables are involved.
- 5.4 D I can graph ordered pairs in the coordinate plane for two sets of data related by a linear rule.
I can draw the line they determine.

Performance Expectation 5.5 Additional Key Content (Numbers, Probability/Data/Statistics/)

- 5.5 A I can tell if a number is prime or composite.
- 5.5 B I can determine and interpret the mean of a set of whole numbers.
- 5.5 C I can construct and interpret line graphs.

Appendix A, cont.**Performance Expectation 5.6 Core Processes Reasoning, Problem Solving, and Communication**

- 5.6 A I can determine the question(s) to be answered given a problem situation.
- 5.6 B I can identify information that is given in a problem and decide whether it is important or necessary to solve the problem.
- 5.6 C I can determine whether additional information is needed to solve a problem.
- 5.6 D I can determine whether a problem is similar to previously solved problems.
I can identify possible strategies for solving the problem.
- 5.6 E I can select and use one or more appropriate strategies to solve a problem.
I can explain why I chose a strategy.
- 5.6 F I can represent a problem using words, numbers, pictures, physical objects, or symbols.
- 5.6 G I can explain why I used a specific problem-solving strategy to solve a problem.
- 5.6 H I can analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.
- 5.6 I I can summarize mathematical information, draw conclusions, and explain my reasoning.
- 5.6 J I can make and test conjectures based on data (or information) collected from explorations and experiments. (A conjecture is an opinion based on incomplete information)

Appendix A, cont.

Washington State
I CAN DO STANDARDS
Sixth Grade Mathematics

Performance Expectation 6.1 Core Content: Multiplication and Division of Fractions and Decimals (Numbers, Operations, Algebra)

- 6.1 A I can compare and order non-negative fractions, decimals and integers using a number line, lists, and the symbols $<$, $>$, or $=$.
- 6.1 B I can represent multiplication and division of non-negative fractions and decimals using area models and the number line.
I can connect each representation to the related equation.
- 6.1 C I can estimate products and quotients of fractions.
I can estimate products and quotients of decimals.
- 6.1 D I can fluently and accurately multiply and divide non-negative fractions.
I can explain the inverse relationship between multiplication and division with fractions.
- 6.1 E I can multiply and divide whole numbers and decimals by 1000, 100, 10, 1, 0.1, 0.01, and 0.001.
- 6.1 F I can fluently and accurately multiply and divide non-negative decimals.
- 6.1 G I can describe the effect of multiplying or dividing a number by one, by zero, by a number between zero and one, and by a number greater than one.
- 6.1 H I can solve single- and multi-step word problems involving operations with fractions and decimals.
I can verify the solutions.

Performance Expectation 6.2 Core Content: Mathematical Expressions and Equations (Operations, Algebra)

- 6.2 A I can write a mathematical expression or equation with variables to represent information in a table or a given situation.
- 6.2 B I can draw a first-quadrant graph in the coordinate plane to represent information in a table or a given situation.
- 6.2 C I can evaluate mathematical expressions when the value for each variable is given.
Example: $2s + 5t$ when $s = 1.2$ and $t = 2.1$
- 6.2 D I can apply the commutative, associative, and distributive properties.
I can use the orders of operations to evaluate mathematical expressions.
- 6.2 E I can solve one-step equations and verify the solutions.
Examples: $112 = 7a$ $1.4y = 42$
- 6.2 F I can solve word problems using mathematical expressions and equations and verify solutions.
(Verification can include the use of numbers, words, pictures, or equations.)

Performance Expectation 6.3 Core Content: Ratios, Rates and Percents (Numbers, Operations, Algebra, Data/Statistics/Probability)

Appendix A, cont.

- 6.3 A I can identify and write ratios as comparisons of part-to-part and part-to-whole relationships.
- 6.3 B I can write ratios to represent a variety of rates.
- 6.3 C I can show percents visually and numerically.
I can convert between the fractional, decimal and percent representations of a number.
- 6.3 D I can solve single- and multi-step word problems involving ratios, rates and percents.
I can verify the solutions.
- 6.3 E I can show that the ratio of the circumference to the diameter of a circle is π (pi).
I know that $22/7$ and 3.14 are common approximations of π (pi).
- 6.3 F I can determine the probability of a simple event using data collected in an experiment.
- 6.3 G I can determine the probability of an event and its complement.
I can represent the probability as a fraction or decimal from 0 to 1 or as a percent from 0 to 100.

Performance Expectation 6.4 Core Content: Two- and three-dimensional figures

- 6.4 A I can determine the circumference and area of circles.
- 6.4 B I can determine the perimeter and area of a figure that can be divided into triangles, rectangles and parts of circles.
- 6.4 C I can solve single- and multi-step word problems involving radius, diameter, circumference and area of circles.
I can verify the solutions.
- 6.4 D I can recognize and draw two-dimensional representations of three-dimensional figures.
- 6.4 E I can determine the surface area and volume of rectangular prisms using appropriate formulas.
I can explain how the formulas work.
- 6.4 F I can determine the surface area of a pyramid.
- 6.4 G I can describe and sort polyhedra (such as prisms and pyramids) by their attributes: parallel faces, types of faces, number of faces, edges, and vertices.

Performance Expectation 6.5 Additional Key Content: (Numbers, Operations)

- 6.5 A I can do mental math computation with non-negative whole numbers, fractions, and decimals.
- 6.5 B I can locate positive and negative integers on the number line.
I can represent positive and negative quantities in various contexts, such as elevation, temperature, debt.
- 6.5 C I can compare and order positive and negative integers using the number line, lists, and the symbols $<$, $>$, or $=$.

Appendix A, cont.

Performance Expectation 6.6 Core Processes (Reasoning, Problem Solving, and Communication)

- 6.6 A I can analyze a problem to determine the question(s) to be answered.
- 6.6 B I can identify relevant, missing and extraneous information that is given in a problem.
- 6.6 C I can analyze and compare problem solving strategies and select one or more to solve a problem.
- 6.6 D I can recognize a problem, describe the process I use to solve the problem, and verify the reasonableness of the answer.
- 6.6 E I can communicate the answer to a question using appropriate representations, such as symbols and mathematical language.
- 6.6 F I can use a problem-solving strategy in more than one question.
- 6.6 G I can extract and organize mathematical information from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.
- 6.6 H I can make and test conjectures based on data (or information) collected from explorations and experiments.
(A conjecture is an opinion based on incomplete information.)

Appendix B

Holt Algebra Alignment

Algebra I Scope/Sequence – Holt, Algebra 1
The Number Properties, Operations, and Linear Equations

Chapter 1 – Foundations of Algebra	Text Page	Standard/s	Vocabulary
Lesson 1 Variables and Expressions	6	Prerequisite for 4.0*	algebraic expression, constant - 6 numerical expression, variable - 6 evaluate, replacement set - 7 absolute value, real numbers - 14 additive inverse, opposites - 15 multiplicative inverse, reciprocal - 21 base, exponent, power - 26 cube root, perfect square - 32 principal square root, square root - 32 integers, natural, whole numbers - 33 rational, irrational numbers - 33 repeating, terminating decimal - 33 hypothesis, conclusion - 38 conditional statement - 38 converse of a conditional stmt - 39 counterexample - 43 closure - 44 order of operations - 48 coefficient, term, like terms - 49
Lesson 2 Adding and Subtracting Real Numbers	14	2.0*	
Lesson 3 Multiplying and Dividing Real Numbers	20	2.0*	
Lesson 4 Powers and Exponents	26	Prerequisite for 2.0*	
Lesson 5 Roots and Irrational Numbers	32	2.0*, 24.2	
Lesson 6 Properties of Real Numbers	42	1.0, 24.3, 25.1	
Lesson 7 Simplifying Expressions	48	1.1, 25.1	

Chapter 2 - Equations	Text Page	Standard/s	Vocabulary
Lesson 1 Solving One-Step Equations	72	Prereq for 2.0*, 5.0*	equation - 72 solution of an equation - 72 solution set - 72 equivalent equation - 79 identity - 93 deductive reasoning - 99 proportion - 102 rate, unit rate, ratio - 102 cross products - 103 percent - 103 scale, scale drawing, scale model - 104 formula - 109 literal equation - 110
Lesson 2 Solving Two-Step Equations	79	Prerequisite for 5.0*	
Lesson 3 Solving Multi-Step Equations	85	4.0*, 5.0*	
Lesson 4 Solving Equations with Variables on Both Sides	92	4.0*, 5.0*	
Lesson 5 Solving Proportions	102	15.0*	
Lesson 6 Solving Literal Equations for a Variable	109	5.0* (extension)	
Lesson 7 Solving Absolute-Value Equations	114	3.0, 5.0*	

Appendix B, cont.

Chapter 3 - Inequalities	Text Page	Standard/s	Vocabulary
Lesson 1 Graphing and Writing Inequalities	136	Prerequisite for 5.0*	inequality - 136 solution of an inequality - 136 equivalent inequalities - 142 compound inequality - 170 intersection - 171 union - 172
Lesson 2 Solving Inequalities by Adding or Subtracting	142	Prerequisite for 5.0*	
Lesson 3 Solving Inequalities by Multiplying or Dividing	148	Prerequisite for 5.0*	
Lesson 4 Solving Two-Step and Multi-Step Inequalities	156	4.0*, 5.0*	
Lesson 5 Solving Inequalities w/ Variables on Both Sides	162	4.0*, 5.0*	
Lesson 6 Solving Compound Inequalities	170	5.0*	
Lesson 7 Solving Absolute-Value Inequalities	178	3.0	

Chapter 5 – Linear Functions	Text Page	Standard/s	Vocabulary
Lesson 1 Linear Equations and Functions	256	6.0*, 7.0*, 17.0, 18.0	linear equation - 256 linear function - 256 x-intercept - 263 y-intercept - 263 rate of change - 272 rise - 272 run - 272 slope - 272 constant of variation - 282 direct variation - 282 parallel lines - 304 perpendicular lines - 306
Lesson 2 Using Intercepts	263	6.0*	
Lesson 3 Slope	272	Prereq for 6.0*, 8.0	
Lesson 4 Direct Variation	282	6.0*	
Lesson 5 Slope-Intercept Form	290	6.0*	
Lesson 6 Point-Slope Form	297	6.0*, 7.0*	
Lesson 7 Slopes of Parallel and Perpendicular Lines	304	8.0, 25.1	

Chapter 6 – Systems of Equations and Inequalities	Text Page	Standard/s	Vocabulary
Lesson 1 Solving Systems by Graphing	329	6.0*, 9.0*	consistent system - 350 dependent system - 351 inconsistent system - 350 linear inequality - 364 solution of a system of linear inequalities - 371 independent system - 351 solution of a system of linear equations - 329 system of linear equations - 329 solution of a linear inequality - 364 system of linear inequalities - 371
Lesson 2 Solving Systems by Substitution	336	9.0*	
Lesson 3 Solving Systems by Elimination	343	9.0*	
Lesson 4 Solving Special Systems	350	8.0, 9.0*	
Lesson 5 Applying Systems	356	9.0*, 15.0*	
Lesson 6 Solving Linear Inequalities	364	6.0*	
Lesson 7 Solving Systems of Linear Inequalities	371	6.0*, 9.0*	

Appendix B, cont.

Chapter 7 – Exponents and Polynomials	Text Page	Standard/s	Vocabulary
Lesson 1 Integer Exponents	394	2.0*	scientific notation - 401 index - 422 monomial, polynomial - 430 degree of a monomial/polynomial - 430 binomial, cubic - 431 leading coefficient, quadratic - 431 standard form of a polynomial - 431 trinomial - 431 perfect-square trinomial - 455 difference of two squares - 457
Lesson 2 Powers of 10 and Scientific Notation	400	2.0*	
Lesson 3 Multiplication Properties of Exponents	408	2.0*	
Lesson 4 Division Properties of Exponents	415	2.0*	
Lesson 5 Fractional Exponents	422	2.0*	
Lesson 6 Polynomials	430	Prerequisite for 10.0*	
Lesson 7 Adding and Subtracting Polynomials	438	10.0*	
Lesson 8 Multiplying Polynomials	446	10.0*	
Lesson 9 Special Products of Binomials	455	10.0*	

Chapter 8 – Factoring Polynomials	Text Page	Standard/s	Vocabulary
Lesson 1 Factors and Greatest Common Factors	478	Prerequisite for 11.0	prime factorization - 478 greatest common factor - 479 contradiction - 484 indirect proof - 484
Lesson 2 Factoring by GCF	487	11.0	
Lesson 3 Factoring $x^2 + bx + c$	496	11.0	
Lesson 4 Factoring $ax^2 + bx + c$	505	11.0	
Lesson 5 Factoring Special Products	514	11.0	
Lesson 6 Choosing a Factoring Method	522	11.0	

Chapter 9 – Quadratic Functions and Equations	Text Page	Standard/s	Vocabulary
Lesson 1 Quadratic Equations and Functions	544	7.0*, 17.0, 21.0*	maximum value, minimum value - 546 parabola - 545 quadratic equation, quadratic func - 544 vertex - 546 zero of a function - 553 completing the square - 591 axis of symmetry - 554 discriminant - 605
Lesson 2 Factoring by GCF	553	21.0*, 23.0*	
Lesson 3 Graphing Quadratic Functions	560	21.0*, 23.0*	
Lesson 4 Solving Quadratic Equations by Graphing	568	21.0*, 23.0*	
Lesson 5 Solving Quadratic Equations by Factoring	576	21.0, 23.0*	
Lesson 6 Solving Quad Equations by using Square Roots	582	2.0*, 23.0*	
Lesson 7 Completing the Square	591	2.0, 14.0*, 23.0*	
Lesson 8 The Quadratic Formula	598	19.0*, 20.0*	
Lesson 9 The Discriminate	605	22.0, 23.0*	

Appendix B, cont.

Chapter 10 – Rational Functions and Equations	Text Page	Standard/s	Vocabulary
Lesson 1 Inverse Variation	627	Prereq 13.0*, 17.0	inverse variation - 627 asymptote - 634 discontinuous function - 634 excluded value - 634 rational function - 634 rational expression - 642 rational equation - 674 extraneous solution - 675
Lesson 2 Rational Functions	634	13.0*, 17	
Lesson 3 Simplifying Rational Expressions	642	12.0*	
Lesson 4 Multiplying and Dividing Rational Expressions	652	13.0*	
Lesson 5 Adding and Subtracting Rational Expressions	659	13.0*, 15.0*	
Lesson 6 Dividing Polynomials	667	10.0*, 12.0*	
Lesson 7 Solving Rational Equations	674	15.0*	
Lesson 8 Applying Rational Equations	679	15.0*	

Chapter 11 – Radical and Exponential Functions	Text Page	Standard/s	Vocabulary
Lesson 1 Square-Root Functions	700	2.0* (ext), 17.0	square-root function - 700 radical expression, radicand - 705 like radicals - 711 radical equation - 722 common ratio - 732 geometric sequence - 732 exponential function - 738 exponential growth - 747 compound interest - 748 exponential decay, half-life - 749
Lesson 2 Radical Expressions	705	2.0* (extension)	
Lesson 3 Adding and Subtracting Radical Expressions	711	2.0* (extension)	
Lesson 4 Multiplying and Dividing Radical Expressions	716	2.0* (extension)	
Lesson 5 Solving Radical Equations	722	2.0* (extension)	
Lesson 6 Geometric Sequences	732		
Lesson 7 Exponential Functions	738		
Lesson 8 Exponential Growth and Decay	747		
Lesson 9 Linear, Quadratic, and Exponential Models	755	7.0* (extension)	

Appendix C

Holt Geometry Alignment
Geometry Scope and Sequence Holt *Geometry*

First Six Weeks				
Day	TEKS	Date	Class Activities	Chapter/Section
1 C			<i>ARE YOU READY?</i> (optional Skill Worksheets 20, 57, 60, and 79)	Diagnostic/p. 3
			<i>Foundations for Geometry</i>	<i>Chapter 1</i>
2 A/B	G.1A G.7A		Understanding Points, Lines and Planes	1.1/p. 6-11
3 A/B	G.1A G.1B G.2A G.2B G.3B G.7C		Measuring and Constructing Segments Measuring and Constructing Angles	1.2/p. 13-19 1.3/p. 20-27
4 A/B	G.1A G.1B G.2B G.8A		Pairs of Angles Using Formulas in Geometry	1.4/p. 28-33 1.5/p. 36-41
5 A/B	G.1A G.7A G.7C G.8C		Midpoint and Distance in the Coordinate Plane <i>READY TO GO ON?</i>	1.6/p. 43-49 Quiz 1.1-1.4/p. 35
6 A/B	G.1A G.5C		Transformations in the Coordinate Plane (translations on graph only) Chapter 1 Study Guide: Review	1.7/p. 50-55 Review/p. 60-63
7 A/B			Chapter 1 Test <i>TAKS TACKLER</i> and <i>TAKS PREP</i>	<i>TAKS</i> /p. 66-69
			<i>Geometric Reasoning</i>	<i>Chapter 2</i>
8 A/B	G.2B G.3D G.5B		<i>ARE YOU READY?</i> Using Inductive Reasoning to Make Conjectures	Quiz/p. 71 2.1/p. 74-79
9 A/B	G.2B G.3A G.3B G.3C G.3E		Conditional Statements Using Deductive Reasoning to Verify Conjectures Biconditional Statements and Definitions	2.2/p. 81-87 2.3/p. 88-93 2.4/p. 96-101
10 A/B	G.3B G.3C G.3E		<i>READY TO GO ON?</i> Algebraic Proof	Quiz 2.1-2.4/p. 103 2.5/p. 104-109
11 A/B	G.1A G.3B G.3C G.3E		Geometric Proof	2.6/p. 110-116 Omit Section 2.7

First Six Weeks continued				
Day	TEKS	Date	Class Activities	Chapter/Section
12 A/B		9-26	Chapter 2 Study Guide: Review (omit Section 2.7) <i>READY TO GO ON?</i>	Review/p. 130-133 Quiz 2.5-2.6/p. 127
13 A/B		9-28	Chapter 2 Test <i>COLLEGE ENTRANCE EXAM PRACTICE TAKS TACKLER</i> and <i>TAKS PREP</i>	<i>SAT</i> /p. 135 <i>TAKS</i> /p. 136-139
			<i>Parallel and Perpendicular Lines</i>	<i>Chapter 3</i>
14 A/B		10-2	<i>ARE YOU READY?</i> Lines and Angles	Quiz/p. 143 3.1/p. 146-151
15 A/B	G.3C G.3E G.9A	10-4	Systems of Equations Angles Formed by Parallel Lines and Transversals	<i>TAKS</i> /p. 152-153 3.2/p. 155-161

Second Six Weeks				
Day	TEKS	Date	Class Activities	Chapter/Section
1 A/B	G.1A G.2A G.3C G.3E G.9A		Proving Lines Parallel Perpendicular Lines	3.3/p. 162-169 3.4/p. 172-178
2 A/B			Formal Proofs (not in textbook)	Optional Curriculum (06-07)
3 A/B			Benchmark 1 Test <i>READY TO GO ON?</i>	Quiz 3.1-3.4/p. 181
4 A/B	G.7A G.7B G.7C		Slopes of Lines Go over Benchmark 1 Test	3.5/p. 182-187
5 A/B	G.3C G.3E G.7A G.7B G.7C		Lines in the Coordinate Plane Direct Variation	3.6/p. 190-197 <i>TAKS</i> /p. 501
6 A/B			Scatter Plots and Lines of Best Fit <i>READY TO GO ON?</i> Chapter 3 Study Guide: Review	<i>TAKS</i> /p. 198-199 Quiz 3.5-3.6/p. 201 Review/p. 202-205
7 A/B			Chapter 3 Test <i>TAKS TACKLER ARE YOU READY?</i>	<i>TAKS</i> /p. 208-209 Quiz/p. 213
			<i>Triangle Congruence</i>	<i>Chapter 4</i>
8	G.1A		Classifying Triangles	4.1/p. 216-221

A/B			<i>TAKS PREP</i>	<i>TAKS/p.</i> 210-211
9 A/B	G.1A G.2B		Angle Relationships in Triangles	4.2/p. 223-230
10 A/B	G.1A G.1B G.2A G.2B G.3B G.3C G.3E G.9B G.10B		Congruent Triangles Triangle Congruence: SSS and SAS Triangle Congruence: ASA, AAS, and HL	4.3/Discuss ONLY 4.4/p. 242-249 4.5/p. 252-259
11 A/B	G.1A G.3E G.7A G.10B		Triangle Congruence: CPCTC	4.6/p. 260-265 Omit Section 4.7

Second Six Weeks continued				
Day	TEKS	Date	Class Activities	Chapter/Section
12 A/B	G.2B G.3C G.10B	11-8	Quadratic Equations Isosceles and Equilateral Triangles	<i>TAKS/p.</i> 266 4.8/p. 273-279
13 A/B		11-12	Chapter 4 Study Guide: Review (omit Section 4.7) <i>READY TO GO ON?</i>	Review/p. 284-287 Quiz 4.4-4.8/p. 281
14 A/B		11-14	Chapter 4 Test <i>TAKS TACKLER ARE YOU READY?</i>	<i>TAKS/p.</i> 290-291 Quiz/p. 297

Third Six Weeks				
Day	TEKS	Date	Class Activities	Chapter/Section
			<i>Properties and Attributes of Triangles</i>	<i>Chapter 5</i>
1 A/B	G.3B G.3E G.7A G.7B G.7C G.10B		Perpendicular and Angle Bisectors <i>TAKS PREP</i>	5.1/p. 300-306 <i>TAKS/p.</i> 292-293
2 A/B	G.2A G.2B G.3B G.7A G.7B		Bisectors of Triangles Medians and Altitudes of Triangles	5.2-5.3/Reading Strategies Worksheets ONLY

3 A/B	G.2A G.2B G.3B G.5A G.5B G.7B G.9B		The Triangle Midsegment Theorem Indirect Proof and Inequalities in One Triangle (omit indirect proof)	5.4/p. 322-327 5.5/p. 332-339
4 A/B	G.3B G.3E		Solving Compound Inequalities Inequalities in Two Triangles	TAKS/p. 330 5.6/p. 340-345
5 A/B	G.1B G.5B G.5D G.8C G.11C		Simplest Radical Form The Pythagorean Theorem	TAKS/p. 346 5.7/p. 348-355
6 A/B			Benchmark 2 Test	
7 A/B	G.3B G.5A G.5D G.7A		Applying Special Right Triangles Go over Benchmark 2 Test	5.8/p. 356-362
8 A/B	G.5D		Chapter 5 Study Guide: Review Continue Applying Special Right Triangles	Review/p. 366-369 Worksheets
9 A/B			Chapter 5 Test <i>TAKS PREP</i> (may omit certain problems) <i>ARE YOU READY?</i>	TAKS/p. 374-375

Third Six Weeks continued				
Day	TEKS	Date	Class Activities	Chapter/Section
			<i>Similarity</i>	<i>Chapter 7</i>
10 A/B	G.5B G.7B G.7C G.11A G.11B		Ratio and Proportion Ratios in Similar Polygons	7.1/p. 454-459 7.2/p. 462-467
11 A/B	G.5B G.11A G.11B		Triangle Similarity: AA, SSS, and SAS <i>READY TO GO ON?</i>	7.3/p. 470-477 Quiz 7.1-7.3/p. 479
12 A/B	G.2A G.3B G.5B G.9B G.11A G.11B		Applying Properties of Similar Triangles	7.4/p. 481-487

13 A/B	G.1B G.5A G.11A G.11B G.11D		Using Proportional Relationships (add volume) Begin First Semester Review	7.5/p. 488-494 Section 7.6 moved to Chapter 12
14 A/B			Chapter 7 Study Guide: Review (omit Section 7.6) First Semester Review	Review/p. 504-507
15 A/B			Chapter 7 Test First Semester Review	
16			First Semester Exam	

Fourth Six Weeks				
Day	TEKS	Date	Class Activities	Chapter/Section
			<i>Polygons and Quadrilaterals</i>	<i>Chapter 6</i>
1 A/B	G.2B G.3B G.4A G.5A G.5B G.7A		Properties and Attributes of Polygons <i>ARE YOU READY?</i>	6.1/p. 382-388 Quiz/p. 377
2 A/B	G.2B G.3B G.3E G.7A G.7B G.7C G.10B		Properties of Parallelograms	6.2/p. 391-397
3 A/B	G.2A G.2B G.3B G.3E G.7A G.7B G.7C		Conditions for Parallelograms <i>READY TO GO ON?</i>	6.3/p. 398-405 Quiz 6.1-6.3/p. 407
4 A/B	G.2A G.2B G.3B G.3E G.7A G.7B G.7C	1-31	Properties of Special Parallelograms Conditions for Special Parallelograms	6.4/p. 408-415 6.5/p. 418-425

5 A/B	G.2A G.2B G.3B G.3E G.7A G.7B G.7C		Properties of Kites and Trapezoids <i>READY TO GO ON?</i>	6.6/p. 427-435 Quiz 6.4-6.6/p. 437
6 A/B			Chapter 6 Study Guide: Review <i>TAKS TACKLER</i>	Review/p. 438-441 <i>TAKS</i> /p. 444-445
7 A/B			Chapter 6 Test <i>TAKS PREP ARE YOU READY?</i>	<i>TAKS</i> /p. 446-447

Fourth Six Weeks continued				
Day	TEKS	Date	Class Activities	Chapter/Section
			<i>Extending Perimeter, Circumference, and Area</i>	<i>Chapter 9</i>
8 A/B	G.1B G.3C G.3E G.5A G.8C		Developing Formulas for Triangles and Quadrilaterals	9.1/p. 589-597
9 A/B	G.5A G.8A G.8C		Developing Formulas for Circles and Regular Polygons (Emphasize Triangle, Square, and Hexagon)	9.2/p. 600-605
10 A/B	G.7A G.8A		Composite Figures Perimeter and Area in the Coordinate Plane	9.3/p. 606-612 9.4/p. 616-621
11 A/B	G.5A G.5B G.11D		Effects of Changing Dimensions Proportionally	9.5/p. 622-627
12 A/B	G.8A		Probability Geometric Probability	<i>TAKS</i> /p. 628-629 9.6/p. 630-636
13 A/B			Chapter 9 Study Guide: Review <i>READY TO GO ON?</i> <i>TAKS TACKLER</i>	Review/p. 640-643 Quiz 9.4-9.6/p. 639 <i>TAKS</i>

Fifth Six Weeks				
Day	TEKS	Date	Class Activities	Chapter/Section
1 A/B			Chapter 9 Test	

2 A/B			TAKS ELA Test <i>TAKS PREP ARE YOU READY?</i>	TAKS/p. 648-649 Quiz/p. 651
			<i>Spatial Reasoning</i>	<i>Chapter 10</i>
3 A/B	G.2B G.5A G.6A G.6B G.6C G.7C G.8C G.9D		Solid Geometry Representations of Three-Dimensional Figures Formulas in Three Dimensions (Euler’s Formula)	10.1/p. 654-660 10.2/p. 661-668 10.3/p. 670-677
4 A/B	G.1B G.5A G.5B G.6B G.8D G.11D		Surface Area of Prisms and Cylinders Volume of Prisms and Cylinders <i>READY TO GO ON?</i>	10.4/p. 680-687 10.6/p. 697-704 Quiz 10.1-10.3/p. 679
5 A/B	G.1B G.5A G.5B G.6B G.8D G.11D		Surface Area of Prisms and Cylinders Volume of Prisms and Cylinders Spheres	10.4/p. 680-687 10.6/p. 697-704 10.8/p. 714-721
6 A/B	G.5A G.5B G.6B G.8D G.11D		Surface Area of Pyramids and Cones Volume of Pyramids and Cones <i>READY TO GO ON?</i>	10.5/p. 689-696 10.7/p. 705-712 Quiz 10.4-10.8/p. 725
7 A/B			Benchmark 3 Test Chapter 10 Study Guide: Review	Review/p. 730-733
8 A/B			Chapter 10 Test <i>TAKS TACKLER ARE YOU READY?</i>	TAKS/p. 736-737 Quiz/p. 821
			<i>Extending Transformational Geometry</i>	<i>Chapter 12</i>
9 A/B	G.1C G.2A G.2B G.7A G.10A		Reflections Translations Extension: Spherical Geometry <i>TAKS PREP</i>	12.1/p. 824-830 12.2/p. 831-837 Extension/p. 726-729 <i>TAKS/p. 738-739</i>

Fifth Six Weeks continued				
Day	TEKS	Date	Class Activities	Chapter/Section
10 A/B	G.2A G.2B G.5C G.7A G.10A		Transformations of Functions Rotations Symmetry	TAKS/p. 838 12.3/p. 839-845 12.5/p. 856-862 Omit Section 12.4
11 A/B	G.2A G.2B G.5C G.9B G.11A G.11B G.11D		Tessellations Dilations (include Section 7.6) Dilations and Similarity in the Coordinate Plane	12.6/Reading Strategies Worksheet ONLY 12.7/p. 872-879 7.6/p. 495-500
12 A/B			Chapter 12 Study Guide: Review (omit Section 12.4) <i>READY TO GO ON?</i>	Review/p. 884-887 Quiz 12.5-12.7/p. 881
13 A/B			Chapter 12 Test <i>TAKS TACKLER ARE YOU READY?</i>	TAKS/p. 890-891 Quiz/p. 515
			<i>Right Triangles and Trigonometry</i>	<i>Chapter 8</i>
14 A/B	G.5B G.5D G.8A G.8C G.11A G.11B G.11C		Similarity in Right Triangles <i>TAKS PREP</i>	8.1/p. 518-523 TAKS/p. 892-893
15 A/B	G.5B G.5D G.8C G.11B G.11C		Trigonometric Ratios	8.2/p. 525-532

Sixth Six Weeks				
Day	TEKS	Date	Class Activities	Chapter/Section
1 A/B	G.5D G.7A G.7C G.8C G.11B G.11C		Solving Right Triangles (adjust according to your own time needs)	8.3/p. 534-541
2 A/B	G.5D G.7A G.7C G.8C G.11B G.11C		Solving Right Triangles <i>TAKS TACKLER</i> <i>READY TO GO ON?</i>	Cont. 8.3 <i>TAKS</i> /p. 578-579 Quiz 8.1-8.3/p. 543
3 A/B	G.5D G.11C		Angles of Elevation and Depression <i>TAKS PREP</i>	8.4/p. 544-549 <i>TAKS</i> /p. 580-581
4 A/B			Sections 8.3 and 8.4 Review (<i>TAKSWEEK</i>)	Worksheets Omit Sections 8.5-8.6
5 A/B			Chapter 8 Study Guide: Review (omit Sections 8.5-8.6)	Review/p. 572-575
6 A/B			Chapter 8 Test <i>ARE YOU READY?</i>	Quiz/p. 743
			<i>Circles</i>	<i>Chapter 11</i>
7 A/B	G.1A G.2A G.2B G.9C		Lines That Intersect Circles	11.1/p. 746-754
8 A/B	G.1A G.2A G.2B G.8C G.9C		Arcs and Chords	11.2/p. 756-763
9 A/B	G.1A G.1B G.8B G.9C		Sector Area and Arc Length	11.3/p. 764-769
10 A/B	G.1A G.2A G.2B G.5A G.5B G.9C		Inscribed Angles Angle Relationships in Circles <i>READY TO GO ON?</i>	11.4/p. 772-779 11.5/p. 782-789 Quiz 11.1-11.3/p. 771

Sixth Six Weeks continued				
Day	TEKS	Date	Class Activities	Chapter/Section
11 A/B	G.1A G.2B G.5A		Segment Relationships in Circles	11.6/p. 792-798
12 A/B	G.1A G.2B G.4A G.5A		Circles in the Coordinate Plane	11.7/p. 799-805
13 A/B			Chapter 11 Study Guide: Review <i>READY TO GO ON?</i>	Review/p. 810-813 Quiz 11.4-11.7/p. 807
14 A/B			Chapter 11 Test Second Semester Review	
15 A/B			Second Semester Review	
16			Second Semester Exam	

Appendix D Algebra Calendar

September 2010-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1-teacher work day	2-1st day students	3	4
5	6-Labor Day	7-1.1 Variables and expressions	8-1.2 Adding and subtracting real numbers	9-1.3 Multiplying and dividing real numbers	10-Quiz & 1-4 Powers and exponents	11
12	13-1.4 Powers and exponents	14-1.5 Square roots and real numbers	15- Quiz & 1-6 Order of operations	16-1-6 Order of operations	17-1.7 Simplifying expressions	18
19	20-1.8 Introduction to functions	21-1.8 Introductions to functions	22-review	23-review	24-ch. 1 test	25
26	27-2.1&2.2 Solving equations by adding and subtracting Solving equations by multiplying and divid-	28-2.3 Solving 2-step and multi-step equations	29-2.3 Solving 2-step and multi-step equations	30-quiz & 2.4 Solving equations w/ variables on both sides		

Appendix D, Cont.

October 2010-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1-2.4 Solving equations w/ variables on both sides	2
3	4-2.5 Solving for a variable	5-2.5 Solving for a variable	6-Review	7 Review	8-LID day	9
10	11-mid ch. 2 test Sections 2.1-2.5	12-2.6 Rates, Ratios, and Proportions	13-2.6 Rates, Ratios, and Pro- portions	14-2.7 Applications of Propor- tions	15-2.8 Percents	16
17	18-2.8 Percents	19-2.9 Applications of per- cents	20-2.10 Percents increase and decrease	21-Review	22-Review	23
24	25-Ch. 2 Test	26-Ch 2 Cumulative Test	27--3.1 Graphing and writing inequalities	28-3.2 Solving inequalities by adding or subtracting	29-3.3 Solving inequalities by multiplying or dividing	30
31						

Appendix D, Cont.

November 2010-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1-Review	2-3.4 Solving 2-step and multi-step inequalities	3-3.4 Solving 2-step and multi-step inequalities	4-3.5 Solving inequalities with variables on both sides	5-3.6 Solving compound ine- qualities	6
7	8-Review	9-Review	10-Ch. 3 Test	11-Veteran's Holiday	12-parent teacher conference	13
14	15-parent teacher conferences	16-Ch. 3 Cumulative Test	17-4.1 Graphing Relationships	18-4.2 Relations and Functions	19-4.3 Writing functions	20
21	22-4.3 Writing functions	23-4.4 Graphing functions	24-4.4 Graphing functions	25-Thanksgiving	26-Thanksgiving	27
28	29-Review	30-4.5 Scatter plots and trend lines				

Appendix D, Cont.

December 2010-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1-4.6 Arithmetic sequences	2-Review	3-Review	4
5	6-Ch. 4 Test	7-Ch. 5 Cumulative Test	8-5.1 Identifying linear functions	9-5.2 Using intercepts	10-5.3 Rate of change and slope	11
12	13-5.4 The slope formula	14-Review	15-Review	16-Mid Ch. 5 Test 5.1-5.4	17	18
19	20-winter break	21 winter break	22 winter break	23 winter break	24 winter break	25
26	27 winter break	28 winter break	29 winter break	30 winter break	31 winter break	

Appendix D, Cont.

January 2011-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3--5.6 Slope-intercept form	4--5.6 Slope-intercept form	5--5.7 Point-slope form	6-5.8 Slopes of parallel and perpendicular lines	7-Review	8
9	10-Review	11-Ch. 5 Test	12-Ch. 5 Cumulative Test	13-10.1 Organizing and displaying data	14-10.3 Data distributions	15
16	17-Martin Luther King Day	18-10.3 Data distributions	19-10.1 & 10.3 Quiz	20-Review	21-Review	22
23	24-Review	25-Final Chapters 1-5 and 10.1,10.3	26	27	28-Teacher Work Day	29
30	31					

Appendix D, Cont.

February 2011-Algebra

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1-6.1 Solve system by graphing	2-6.1 Solve system by graphing	3-6.2 Solving systems by substitution	4-6.2 Solving systems by substitution	5
6	7-6.2 Solving systems by substitution	8-6.3 Solving systems by eliminations	9-6.3 Solving systems by elimination	10-6.3 Solving systems by elimination	11-6.4 Solving special systems	12
13	14-Review	15-Review	16-mid-ch. 6 Test 6.1-6.4	17-6.5 Solving linear inequalities	18-6.5 Solving linear inequalities	19
20	21-President's Day	22-6.6 Solving systems of linear inequalities	23-6.6 Solving systems of linear inequalities	24-Review	25-Review	26
27	28-Ch. 6 Test					

Appendix D, Cont.

March 2011-Algebra

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1-Ch. 6 Cumulative Test	2-7.1 Integer exponents	3-7.1 Integer exponents	4-7.3 Multiplication properties of exponents	5
6	7-7.3 Multiplication properties of exponents	8-7.4 Division properties of exponents	9-7.4 Division properties of exponents	10-7.2 Powers of 10 and scientific notation	11-staff spec. ed training	12
13	14-review	15-review	16-mid ch. 7 test 7.1-7.4	17-7.5 Polynomials	18-7.6 Adding and subtracting polynomials	19
20	21-7.6 Adding and subtracting polynomials	22-7.7 Multiplying polynomials	23-7.7 Multiplying polynomials	24-review	25-snow make-up day	26
27	28-Review	29-Ch. 7 Test	30-Ch. 7 Cumulative Test	31-8.1 Factors and greatest common factors		

Appendix D, Cont.

April 2011-Algebra I						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1-8.2 Factoring by the GCF	2
3	4-spring break	5-spring break	6-spring break	7-spring break	8-spring break	9
10	11-8.2 Factoring by the GCF	12-8.3 Factoring x^2+bx+c	13-8.3 Factoring x^2+bx+c	14-review	15-8.4 Factoring ax^2+bx+c	16
17	18-8.4 Factoring ax^2+bx+c	19-Review	20-Review	21-ch. 8 test 8.1-8.4	22-9.1 Identifying quadratic functions	23
24	25-9.1 Identifying quadratic functions	26-9.2 Characteristics of quadratic functions	27-9.2 Characteristics of quadratic functions	28-9.3 Graphing quadratic functions	29-Review	30

Appendix D, Cont.

May 2011-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2-Review	3-Mid ch. 9 test 9.1-9.3	4-9.6 Solving quadratic equations by factoring	5-9.6 Solving quadratic equations by factoring	6-9.7 Solving quadratic equations by using square roots	7
8	9-9.9 The quadratic formula	10-9.9 The quadratic formula	11-Review	12-Review	13-snow make-up day	14
15	16-Ch. 9 Test	17-Ch. 9 Cumulative Test	18-10.5 Experimental probabili- ty	19-10.5 Experimental probabili- ty	20-10.6 Theoretical probability	21
22	23--10.6 Theoretical probability	24-10.7 Independent and de- pendent events	25-10.7 Independent and de- pendent events	26-10.8 Combinations and per- mutations	27-10.8 Combinations and per- mutations	28
29	30-memorial day	31-Review				

Appendix D, Cont.

June 2011-Algebra I

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1-Ch. 10 Test Section 5-8	2-Ch. 10 Cumulative Test	3-11.6 Radical Expressions	4
5	6-11.6 Radical Expressions	7-11.7 Adding and Subtract- ing Radical Expressions	8-11.8 Multiplying and Divid- ing Radical Expressions	9-11.9 Solving Radical Equa- tions (if time)	10-11.9 Solving Radical Equa- tions (if time)	11
12	13-Review	14-Review	15-Final 2 Parts Part 1 ch. 11.6-11.9 Part 2 Ch. 6-10	16	17-last day students	18
19	20-building collabora- tive day	21	22	23	24	25
26	27	28	29	30		

Appendix E Geometry Calendar

September 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1-Teacher Work day	2-1st student day	3 Pre-Test	4
5	6-Labor Day	7 Chapter 1 Foundations for Geometry (1-1 to 1-7)	8 1-1	9 1-2	10 1-3	11
12	13 1-3	14 1-4	15 Quiz: 1-1 to 1-4	16 1-5	17 1-6	18
19	20 1-7	21 1-7	22 Review	23 Review	24 Chapter 1 Test	25
26	27 Chapter 2 Geometric Reasoning (2-1 to 2-6) 2-1	28 2-2	29 2-3	30 2-4		

Appendix E, Cont.

October 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 Review	2
3	4 2-5	5 2-5	6 2-6	7 2-6	8-LID day	9
10	11-	12	13 Review	14 Review	15 Chapter 2 Test	16
17	18 Chapter 3 Parallel and Per- pendicular Lines (3-1 to 3-6) 3-1	19 3-2	20	21 3-3	22	23
24	25 3-5	26-	27 3-6	28	29	30
31						

Appendix E, Cont.

November 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3 Review	4 Chapter 3 Test	5 CQI— Cumulative Test (Ch. 1—3)	6
7	8 Chapter 4 Triangle Congruence (4-1 to 4-8) 4-1	9 4-2	10 4-3	11 Veteran's Day Holiday	12 Parent-Teacher Conference Day	13
14	15 Parent-Teacher Conference Day	16 Review 4-1 to 4-3	17 Quiz: 4-1 to 4-3	18 4-4	19 4-5	20
21	22 Review 4-4 & 4-5	23 4-6	24 4-6	25-Thanksgiving	26-Thanksgiving	27
28	29 4-7	30 4-8				

Appendix E, Cont.

December 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Review	2 Review	3 Chapter 4 Test	4
5	6 Chapter 5 Properties and Attributes of Triangles (5-1 to 5-4) 5-1	7 5-2	8 5-3	9	10	11
12	13	14	15 Ch. 5 Review Quiz 5-1 to 5-4	16 Mid-Year Assessment??	17 Review	18
19	20 Winter Break	21 Winter Break	22 Winter Break	23 Winter Break	24 Winter Break	25
26	27 Winter Break	28 Winter Break	29 Winter Break	30 Winter Break	31 Winter Break	

Appendix E, Cont.

January 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 School Resumes Review 5-1 5-2	4 Review 5-3 5-4	5 5-5	6 5-6	7 5-7	8
9	10 5-8	11 Review	12 Review	13 Review	14 Chapter 5 Test	15
16	17-Martin Luther King Jr. Day	18 Chapter 6 Polygons and Quadrilaterals (6-1 to 6-6) 6-1	19 6-2	20 6-3	21 Review ch. 1, 2	22
23	24 Review ch. 3, 4	25 26 27 Finals: Chapters 1—5			28-Teacher Work Day	29
30	31 Review 6-1 to 6-3					

Appendix E, Cont.

February 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 Quiz 6-1 to 6-3	2 6-4	3 6-5	4 6-6	5
6	7	8	9 Review	10 Review	11 Chapter 6 Test	12
13	14 Chapter 7 Similarity (7-1 to 7-6) 7-1	15 7-2	16 7-3	17 7-4	18 7-5	19
20	21-President's Day	22 7-6	23 Review	24 Review	25 Chapter 7 Test	26
27	28 Chapter 8 Right Triangles and Trigonometry (8-1 to 8-6) 8-1					

Appendix E, Cont.

March 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 8-1	2 8-2	3 8-2	4 8-3	5
6	7 8-3	8 Quiz	9 8-4	10 8-5	11-Staff Spec. Ed Training	12
13	14 8-6	15 Review	16 Review	17 Chapter 8 Test	18 CQI— Cumulative Test (Ch. 1—8)	19
20	21 Chapter 9 Extending Pe- rimeter, Circum- ference, & Area (9-1 to 9-5) 9-1	22 9-2	23 9-3	24	25Snow Make- Up Day	26
27	28 9-4	29 9-5	30 Review	31 Review		

Appendix E, Cont.

April 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 Chapter 9 Test	2
3	4 Spring Break	5 Spring Break	6 Spring Break	7 Spring Break	8 Spring Break	9
10	11 Chapter 10 Spatial Reason- ing (10-1 to 10-8) 10-1	12 10-2	13 HSPE ??	14 10-3	15 Quiz	16
17	18 10-4	19 10-5	20 Review	21 10-6	22 10-7	23
24	25 Review	26 10-8	27 Review	28 Review	29 Chapter 10 Test	30

Appendix E, Cont.

May 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 Chapter 11 Circles (11-1 to 11-7) 11-1	3 11-2	4 11-3	5 Review	6 Quiz	7
8	9 11-4	10 11-5	11 11-5	12 11-6	13 Snow Make- Up Day	14
15	16 11-6	17 11-7	18 Review	19 Review	20 Chapter 11 Test	21
22	23 Chapter 12 Extending Transf Geometry (12-1 to 5, 12-7) 12-1	24 12-2	25 12-3	26 12-4	27 Quiz	28
29	30-Memorial Day	31 12-5				

Appendix E, Cont.

June 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	End of Course Exam this week (Tentative)		1 12-7	2 Review	3 Chapter 12 test	4
5	6	7	8	9	10 Finals Review	11
12	13 Finals Review	14 Finals Review	15	16	17 Last Student Day	18
Finals: Chapters 1—12)						
19	20-Building Collaborative Day	21	22	23	24	25
26	27	28	29	30		

Appendix F

Third Credit of Math

Documentation for Students Choosing a Third Credit of Math Other Than Algebra 2

Student Name _____ Grad Year _____

Parent of Guardian Name _____

I have discussed with _____ the option of
(school counselor/administrator)

my son or daughter taking the following course: _____

This course replaces Algebra 2 in order to meet the third math credit graduation requirement for students beginning with the class of 2013 and beyond.

I understand that students may choose a math course other than Algebra 2 if that course better meets their educational and career goals, as identified in their High School and Beyond Plan.

During our discussion, we reviewed information about the math admission requirements for two and four-year colleges, and for credit-bearing math courses at both types of institutions.

Parent or Guardian Signature _____

School Official Signature _____

Student Signature _____

Date _____

To be filed with student's permanent record.

Appendix G

Curriculum Map Extended

PORT ANGELES HIGH SCHOOL 4 YEAR PLAN

Washington State High School Graduation Math Requirements:
 In order to meet mathematics graduation requirements, students in the classes of 2013, 2014, 2015 must do the following:

- Earn three credits from high school level math courses or earn credits in the relevant career and technical education (CTE) equivalent courses; and
- Pass one End of Course Exam (EOC) in Algebra 1 or Geometry; OR
- Complete and pass a CAA alternative option.

Port Angeles High School Math Requirements:
 Each student must do the following:

- Pass at least 3 math courses in sequential order to include Algebra I, Geometry, and Algebra II/Trig or an alternative Vocational Math Credit
- Pass Algebra I or Geometry End of Course Exams (EOC)

NOTE: If End of Course Exam (EOC) is not passed student will continue to take a math course each year.

Vocational Math Credit Options:

- Financial Fitness
- Cabinet Making
- Economics
- Advanced Machine Shop
- Statistics

College Prep (recommended courses)
Students in the class 2012 and beyond applying for admission to a Washington State university are required to take mathematics as a senior.

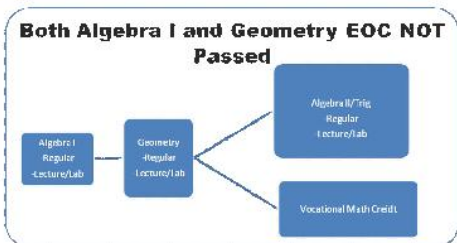
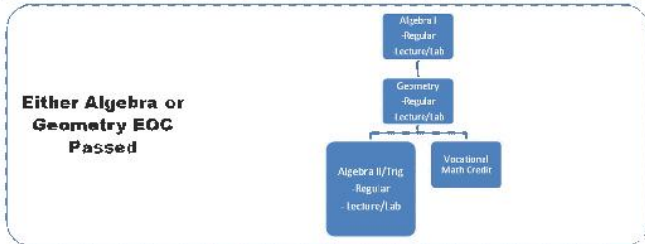
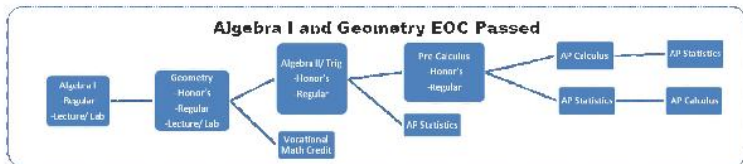
- Algebra I (Year 1)
- Geometry (Year 1 or 2)
- Algebra II/Trig (Year 2 or 3)
- Pre-Calculus (Year 3 or 4)
- AP Calculus and/or AP Statistics (Year 3 or 4)

Trade, Technical, or Junior College (recommended courses)

- Algebra I (Year 1)
- Geometry (Year 1 or 2)
- Algebra II/Trig (Year 2 or 3)
- Pre-Calculus (Year 3 or 4)

General Education/Career Path (recommended courses)

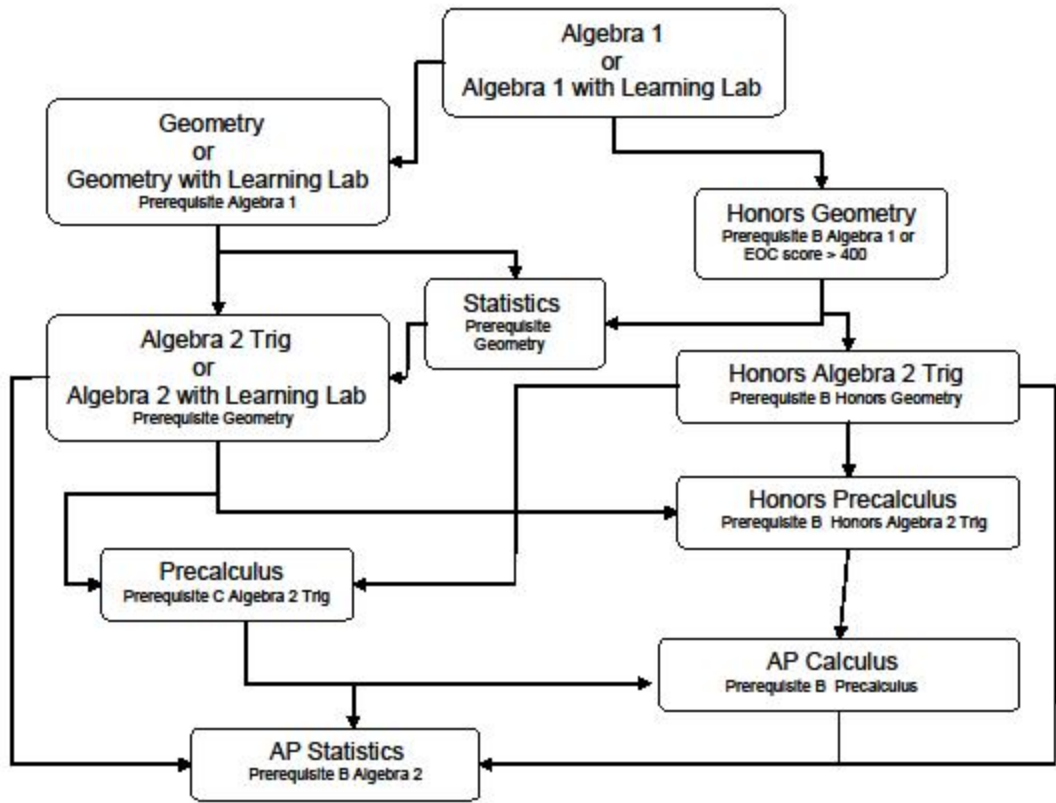
- Algebra I (Year 1)
- Geometry (Year 2)
- Algebra II/Trig or Vocational Math Credit (Year 3)



Appendix H

Curriculum Map Condensed

Port Angeles High School
Mathematics Flow Chart
2011-2012



Port Angeles High School graduation requirements include a successful completion of algebra 1 and geometry. Current Washington State graduation requirements include a successful completion of 3 years of mathematics. See next page for clarification.

Washington State Mathematics Graduation Requirements

All public high school students are required to meet statewide graduation requirements in order to earn a diploma. Specific graduation requirements exist for mathematics now and will change for the class of 2013 and beyond. This page serves to inform families, students, and educators about those requirements.

Students in the classes of **2011 and 2012** who have passed the WASL or the HSPE and have earned two credits of high school mathematics have met the graduation requirements for mathematics.

If a student in the classes of **2011 and 2012 has not** passed the WASL or HSPE, there are several options available. They are:

- **Pass one end-of-course assessment** in algebra 1 or geometry or
- Pass one end-of-course makeup assessment in algebra 1 or geometry or
- Complete and pass a [CAA alternative option](#) or
- Earn two high school mathematics credits after 10th grade.

In order to meet mathematics graduation requirements, students in the classes of **2013 and 2014 must do** the following:

- Earn three credits from high school level math courses or earn credits in the relevant career and technical education (CTE) equivalent courses; and
- **Pass one end-of-course exam** in algebra 1 OR geometry OR
- Complete and pass a [CAA alternative option](#).