WASHINGTON MATHEMATICS STANDARDS FOR GRADE 8	PAGE(S) WHERE TAUGHT (If submission is not a text, cite appropriate resource(s))
Grade 8	
8.1. Core Content: *Linear functions and equations (Algebra)*	
Performance Expectations	
Students are expected to:	
8.1.A Solve one-variable linear equations.	**SE/TE: 32-42, 131-134, 260-265, 271-275, 276-280, 281-285**
8.1.B Solve one- and two-step linear inequalities and graph the solutions on the number line.	**SE/TE: 281-285, 287-292**
8.1.C Represent a linear function with a verbal description, table, graph, or symbolic expression, and make connections among these representations.	**SE/TE: 133-134, 512-513, 515-517, 523, 525-545, 533-538, 540-543, 544-545**
8.1.D Determine the slope and *y*-intercept of a linear function described by a symbolic expression, table, or graph.	**SE/TE: 527-531, 532-533, 534-536, 537, 538-539, 540-545, 553**
8.1.E Interpret the slope and *y*-intercept of the graph of a linear function representing a contextual situation.	**SE/TE: 530-531, 534-535, 537, 538, 540-545**
8.1.F Solve single- and multi-step word problems involving linear functions and verify the solutions.	**SE/TE: 36, 278, 537, 538, 544-545**
8.1.G Determine and justify whether a given verbal description, table, graph, or symbolic expression represents a linear relationship.	
8.2. Core Content: *Properties of geometric figures (Numbers, Geometry/Measurement)*	
Performance Expectations	
Students are expected to:	
8.2.A Identify pairs of angles as complementary, supplementary, adjacent, or vertical, and use these relationships to determine missing angle measures.	**SE/TE: 302-306**
8.2.B Determine missing angle measures using the relationships among the angles formed by parallel lines and transversals.	**SE/TE: 307-310, 311**
8.2.C Demonstrate that the sum of the angle measures in a triangle is 180 degrees, and apply this fact to determine the sum of the angle measures of polygons and to determine unknown angle measures.	**SE/TE: 323, 324-327**
8.2.D Represent and explain the effect of one or more translations, rotations, reflections, or dilations (centered at the origin) of a geometric figure on the coordinate plane.	**SE/TE: 136-139, 140, 141-144, 145, 146-149, 150-151, 186-190, 191**
8.2.E Quickly recall the square roots of the perfect squares from 1 through 225 and estimate the square roots of other positive numbers.	**SE/TE: 106-110, 113-115, 116, 118-121**

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8.2.F Demonstrate the Pythagorean Theorem and its converse and apply them to solve problems.	**SE/TE: 111-115, 118-121, 122**
8.2.G Apply the Pythagorean Theorem to determine the distance between two points on the coordinate plane.	**SE/TE: 124-127**
8.3. Core Content: *Summary and analysis of data sets (Algebra, Data/Statistics/Probability)*	
Performance Expectations	
Students are expected to:	
8.3.A Summarize and compare data sets in terms of variability and measures of center.	**SE/TE: 433-437, 438-440**
8.3.B Select, construct, and analyze data displays, including box-and-whisker plots, to compare two sets of data.	**SE/TE: 438-442, 456-459**
8.3.C Create a scatterplot for a two-variable data set, and, when appropriate, sketch and use a trend line to make predictions.	**SE/TE: 443, 444-447, 448, 456-459**
8.3.D Describe different methods of selecting statistical samples and analyze the strengths and weaknesses of each method.	**The standard can be developed from the following citations:** **SE/TE: 443, 480-483**
8.3.E Determine whether conclusions of statistical studies reported in the media are reasonable.	**The standard can be developed from the following citations:** **SE/TE: 481, 482**
8.3.F Determine probabilities for mutually exclusive, dependent, and independent events for small sample spaces.	**SE/TE: 485-487, 488-489**
8.3.G Solve single- and multi-step problems using counting techniques and Venn diagrams and verify the solutions**.**	**SE/TE: 424-426, 491-502**
8.4. Additional Key Content *(Numbers, Operations)*	
Performance Expectations	
Students are expected to:	
8.4.A Represent numbers in scientific notation, and translate numbers written in scientific notation into standard form.	**SE/TE: 91-96, 572, 573, 575**
8.4.B Solve problems involving operations with numbers in scientific notation and verify solutions.	**SE/TE: 94, 95, 96, 573, 575**
8.4.C Evaluate numerical expressions involving non-negative integer exponents using the laws of exponents and the order of operations.	**SE/TE: 86-90, 570-574, 581-585, 586-587**
8.4.D Identify rational and irrational numbers.	**SE/TE: 106-110**

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8.5. Core Processes: *Reasoning, problem solving, and communication*	
Performance Expectations	
Students are expected to:	
8.5.A Analyze a problem situation to determine the question(s) to be answered.	**This standard is strongly addressed through the Guided Instruction in the following citations:** **SE/TE: 24-25, 78-79, 116-117, 179-180, 240-241, 279-280, 333-334, 385-386, 454-455, 501-502, 544-545, 587-588** **This standard is also embedded throughout the text. Sample citations follow:** **SE/TE: 68, 274, 293, 503**
8.5.B Identify relevant, missing, and extraneous information related to the solution to a problem.	**This standard is strongly addressed through the Guided Instruction in the following citations:** **SE/TE: 24-25, 78-79, 116-117, 179-180, 240-241, 279-280, 333-334, 385-386, 454-455, 501-502, 544-545, 587-588** **This standard is also embedded throughout the text. Sample citations follow:** **SE/TE: 403**
8.5.C Analyze and compare mathematical strategies for solving problems, and select and use one or more strategies to solve a problem.	**This standard is strongly addressed through the following citations: SE/TE: xxxii-xli** **This standard is also embedded throughout the text. Sample citations follow:** **SE/TE: 35, 75, 133, 244, 249, 291, 338, 345, 390, 589**
8.5.D Represent a problem situation, describe the process used to solve the problem, and verify the reasonableness of the solution.	**This standard is strongly addressed through the following citations:** **SE/TE: xxxii-xli** **This standard is also embedded throughout the text. Sample citations follow:** **SE/TE: 35, 75, 97, 151**
8.5.E Communicate the answer(s) to the question(s) in a problem using appropriate representations, including symbols and informal and formal mathematical language.	**This standard is strongly addressed through the Guided Instruction in the following citations:** **SE/TE: 24-25, 78-79, 116-117, 179-180, 240-241, 279-280, 333-334, 385-386, 454-455, 501-502, 544-545, 587-588** **This standard is also embedded throughout the text. Sample citations follow:** **SE/TE: 97, 115, 151**

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8.5.F Apply a previously used problem-solving strategy in a new context.	**This standard is strongly addressed through the Guided Instruction in the following citations:** **SE/TE: 24-25, 78-79, 116-117, 179-180, 240-241, 279-280, 333-334, 385-386, 454-455, 501-502, 544-545, 587-588** **This standard is also embedded throughout the text.**
8.5.G Extract and organize mathematical information from symbols, diagrams, and graphs to make inferences, draw conclusions, and justify reasoning.	**SE/TE: 223, 302, 323, 333, 385, 387, 485**
8.5.H Make and test conjectures based on data (or information) collected from explorations and experiments.	**SE/TE: 96, 223, 302, 323, 387, 522**