OSAS Summative Mathematics Test Blueprints (2025-26)

The Oregon Statewide Assessment System Summative Math Tests are required to be administered annually in Grades 3 – 8 and 11. In each grade, the test consists of two components: a Computer Adaptive Test (CAT) and a Performance Task (PT). These blueprint tables describe the number of items on each component of the OSAS Math Tests at each grade level, including by Claim and Target.

Math Computer Adaptive Tests^ (CATs)

Claim / Reporting Category	Items on Grades 3-5 CAT	Items on Grades 6-8 CAT	Items on Grade 11 CAT
1. Concepts and Procedures	Priority Targets: 7 (6 in Grade 5) Supporting Targets: 3 (4 in G5) Total: 10	Priority Targets: 7 Supporting Targets: 3 Total: 10	Priority Targets: 9 Supporting Targets: 4 Total: 13
2. Problem Solving 4. Modeling and Data Analysis	3	3	3
3. Communicating Reasoning	4	4	4
Field Tested Items*	2	2	2
Total Items on CAT	**19**	**19**	**22**

Math Performance Tasks† (PTs)

Claim / Reporting Category	Items on Grades 3-5 PT	Items on Grades 6-8 PT	Items on Grade 11 PT
1. Concepts and Procedures	0**	0**	0**
2. Problem Solving	1-2	1-2	1-2
3. Communicating Reasoning	0-2	0-2	0-2
4. Modeling and Data Analysis	1-3	1-3	1-3
Total Items on PT	**4-6**	**4-6**	**4-6**

^ All CAT items are machine-scored.

* Field tested items do not count toward a student's individual score. Items are drawn from all four claims and are randomly encountered in a student's CAT.

† Each PT contains 4 – 6 items, up to four of which may require hand-scoring. See the Smarter Balanced Performance Task Specifications for more information.

** PTs are designed to assess the math practice standards and primarily align with Claims 2 – 4. Specific items are drawn from across Claim 1 content domains.

For more information on OSAS test design, see the Smarter Balanced Assessment Consortium's website.

The CAT algorithm is configured to ensure the following:

- For Claim 1, each student will receive at least four (4) items at DOK 2 or higher.
- For Claim 3, each student will receive at least one (1) item at DOK 3 or higher.
- For combined Claims 2 and 4, each student will receive at least one (1) item at DOK 3 or higher.

Background and How to Use This Document

"OSAS Math Tests measure the effectiveness of our schools' and districts' systems of teaching and learning."

Nearly every student in the U.S. is required to take a statewide test in Mathematics in grades 3 – 8 and once in high school. In Oregon, this test is called the OSAS Math Test which is typically administered in April or May of each school year. The purpose of the OSAS Math Test is to help districts and schools know how well their policies, curricula, and instructional practices are supporting students' learning. **The OSAS Math Test is designed to be a valid and reliable measure of the effectiveness of a system**. While students receive an individual score after completing the test, the results of the test are best interpreted at the system level.

"OSAS Math Tests begin with the standards."

The OSAS Math Test is developed to assess Oregon's K-12 Math Standards, which consist of both **content standards** and **practice standards**. If students were tested on every standard, the OSAS Math Test would be very long and inefficient. Rather, students are tested on clusters of standards called **targets**. These targets are grouped into reporting categories, called **claims**, based on whether they assess content standards (Claim 1) or practice standards (Claims 2 – 4). Altogether, each student will interact with around 25 items and most students will complete their entire test in less than two hours.

"OSAS Math Test blueprints can be used by students, educators, school leaders, and more."

Just as an architect's blueprint includes drawings, tables, and dimensions that show how a building is built, a test blueprint includes specific information about how a student's OSAS Math Test is built. It includes the components of the test (CAT and PT), the dimensions (claims and targets) that are measured, tables that show the total number of items, and detailed information about each specific grade level. Test blueprints transparently communicate the information needed for students to successfully show what grade-level mathematics they know and can do and are designed to be used by a variety of shareholders in teaching and learning.

- Students can see how many items they will answer, and the level of cognitive demand required by those items.
- Families can support their child's learning at home by understanding the major concepts of each grade level.
- Educators can create curricular units and pacing guides that prioritize the major mathematical work of each grade level.
- Program administrators can align instructional materials and structure professional learning opportunities to match the organization of the claims and targets.

For more information, please contact the ODE Assessment Team at ODE.AssessmentTeam@ode.oregon.gov.

Grade 3 OSAS Mathematics CAT Blueprint

Claim 1: Concepts and Procedures Grade 3 Assessment Target Sets^	Target Set Designation	Number of Items in Target Set
3.OA.A (Formerly Target A): Represent and solve problems involving multiplication and division. (DOK 1, 2) **3.OA.B** (Formerly Target B): Understand properties of multiplication and the relationship between multiplication and division. (DOK 1) **3.OA.C** (Formerly Target C): Multiply and divide within 100. (DOK 1) **3.OA.D** (Formerly Target D): Solve problems involving the four operations, and identify and explain patterns in arithmetic. (DOK 2)	Priority	4
3.NF.A (Formerly Target F): Develop understanding of fractions as numbers. (DOK 1, 2)	Priority	1
3.GM.B (Formerly Target G*): Solve problems involving measurement and estimation. (DOK 1, 2) **3.GM.C** (Formerly Target I): Geometric measurement: understand concepts of area and relate area to multiplication and to addition. (DOK 1, 2)	Priority	2
3.NBT.A (Formerly Target E): Use place value understanding and properties of operations to perform multi-digit arithmetic. (DOK 1)	Supporting	1
3.GM.A (Formerly Target K): Reason with shapes and their attributes. (DOK 1, 2) **3.GM.D** (Formerly Target J): Geometric measurement: recognize perimeter. (DOK 1)	Supporting	1
3.DR.A: Pose investigative questions and collect/consider data. (DOK 2) **3.DR.B** (Formerly Target H*): Analyze, represent, and interpret data. (DOK 2, 3)	Supporting	1

^ DOK = Depth of Knowledge. Indicates the range of cognitive complexity of items within a target, consistent with Smarter Balanced Content Specifications.

* Indicates target language changed in the 2021 Oregon K-12 Math Standards.

Grade 3 OSAS Mathematics CAT Blueprint

Claims 2 – 4 Grade 3 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 3 OSAS Math CAT Blueprint

Grade 4 OSAS Mathematics CAT Blueprint

Claim 1: Concepts and Procedures Grade 4 Assessment Target Sets^	Target Set Designation	Number of Items in Target Set
4.OA.A (Formerly Target A): Use the four operations with whole numbers to solve problems. (DOK 1, 2)	Priority	1 – 2
4.NBT.A (Formerly Target D): Generalize place value understanding for multi-digit whole numbers. (DOK 1, 2) **4.NBT.B** (Formerly Target E): Use place value understanding and properties of operations to perform multi-digit arithmetic. (DOK 1, 2)	Priority	2
4.NF.A (Formerly Target F): Extend understanding of fraction equivalence and ordering. (DOK 1, 2) **4.NF.B** (Formerly Target G*): Build fractions from unit fractions. (DOK 1, 2) **4.NF.C** (Formerly Target H): Understand decimal notation for fractions, and compare decimal fractions. (DOK 1, 2)	Priority	3
4.DR.B (Formerly Target J*): Analyze, represent, and interpret data. (DOK 1, 2)	Priority	0 – 1
4.OA.B (Formerly Target B): Gain familiarity with factors and multiples. (DOK 1, 2) **4.OA.C** (Formerly Target C): Generate and analyze patterns. (DOK 2, 3)	Supporting	1
4.GM.A (Formerly Target L): Draw and identify lines and angles, and classify shapes by properties of their lines and angles. (DOK 1, 2) **4.GM.B** (Formerly Target I*): Solve problems involving measurement and conversion of measurements. (DOK 1, 2) **4.GM.C** (Formerly Target K): Geometric measurement: understand concepts of angle and measure angles. (DOK 1, 2)	Supporting	2
4.DR.A Pose investigative questions and collect/consider data.	*Supporting*	*0***

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** Indicates a new target within the 2021 Oregon K-12 Math Standards that will be assessed in a future year.

Grade 4 OSAS Mathematics CAT Blueprint

Claims 2 – 4 Grade 4 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 4 OSAS Math CAT Blueprint

Grade 5 OSAS Mathematics CAT Blueprint

Claim 1: Concepts and Procedures Grade 5 Assessment Target Sets^	Target Set Designation	Number of Items in Target Set
5.NBT.A (Formerly Target C): Understand the place value system. (DOK 1, 2) **5.NBT.B** (Formerly Target D): Perform operations with multi-digit whole numbers and with decimals to hundredths. (DOK 1, 2)	Priority	3
5.NF.A (Formerly Target E): Use equivalent fractions as a strategy to add and subtract fractions. (DOK 1, 2) **5.NF.B** (Formerly Target F*): Apply and extend previous understandings of multiplication and division. (DOK 1, 2)	Priority	3
5.DR.A *Pose investigative questions and collect/consider data.*	*Priority*	*0***
5.OA.A (Formerly Target A): Write and interpret numerical expressions. (DOK 1) **5.OA.B** (Formerly Target B): Analyze patterns and relationships. (DOK 2)	Supporting	1
5.GM.A (Formerly Target J): Graph points on the coordinate plane to solve real-world and mathematical problems. (DOK 1) **5.GM.B** (Formerly Target K): Classify two-dimensional figures into categories based on their properties. (DOK 2) **5.GM.C** (Formerly Target G): Convert like measurement units within a given measurement system. (DOK 1) **5.GM.D** (Formerly Target I*): Geometric measurement: understand concepts of volume. (DOK 1, 2)	Supporting	2 – 3
5.DR.B (Formerly Target H*): Analyze, represent, and interpret data. (DOK 1, 2)	Supporting	0 – 1

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Grade 5 OSAS Mathematics CAT Blueprint

Claims 2 – 4 Grade 5 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 5 OSAS Math CAT Blueprint

Grade 6 OSAS Mathematics CAT Blueprint[†]

Claim 1: Concepts and Procedures Grade 6 Assessment Target Sets[^]	Target Set Designation	Number of Items in Target Set
6.AEE.A (Formerly Target E): Apply and extend previous understandings of arithmetic to algebraic expressions. (DOK 1) **6.AEE.B** (Formerly Target F): Reason about and solve one-variable equations and inequalities. (DOK 1, 2) **6.AEE.C** (Formerly Target G): Represent and analyze quantitative relationships between dependent and independent variables. (DOK 2)	Priority	2 – 3
6.RP.A (Formerly Target A): Understand ratio concepts and use ratio reasoning to solve problems. (DOK 1, 2)	Priority	1 – 2
6.NS.A (Formerly Target B): Apply and extend previous understandings of multiplication and division to divide fractions by fractions. (DOK 1, 2) **6.NS.C** (Formerly Target D): Apply and extend previous understandings of numbers to the system of rational numbers. (DOK 1, 2)	Priority	2
6.DR.C (Formerly Target J*): Analyze, summarize, and describe data. (DOK 1, 2)	Priority	1
6.NS.B (Formerly Target C): Compute fluently with multi-digit numbers and find common factors and multiples. (DOK 1, 2)	Supporting	1
6.GM.A (Formerly Target H): Solve real-world and mathematical problems involving area, surface area, and volume. (DOK 1, 2)	Supporting	1
6.DR.A Formulate statistical investigative questions. (DOK 2) **6.DR.B** (Formerly Target I*): Collect and consider data. (DOK 1, 2) **6.DR.D** Interpret data and answer investigative questions. (DOK 1, 2)	Supporting	1

† Beginning in Grade 6 the Math CAT consists of one segment that includes an embedded Desmos calculator and one segment that does not allow for calculator use, consistent with Smarter Balanced Item Specifications. See the OSAS Mathematics Target Explorer for more information.

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Grade 6 OSAS Mathematics CAT Blueprint†

Claims 2 – 4 Grade 6 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions. **Target G**: In Grades 6 – HS, determine conditions under which an argument does and does not apply.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 6 OSAS Math CAT Blueprint

Grade 7 OSAS Mathematics CAT Blueprint†

Claim 1: Concepts and Procedures Grade 7 Assessment Target Sets^	Target Set Designation	Number of Items in Target Set
7.AEE.A (Formerly Target C): Use properties of operations to generate equivalent expressions. (DOK 1, 2) **7.AEE.B** (Formerly Target D*): Solve mathematical problems in authentic contexts using numerical and algebraic expressions and equations. (DOK 1, 2)	Priority	3
7.RP.A (Formerly Target A*): Analyze proportional relationships and use them to solve real-world and mathematical problems in authentic contexts. (DOK 2)	Priority	2
7.NS.A (Formerly Target B): Apply and extend previous understandings of operations with fractions. (DOK 1, 2)	Priority	1
7.DR.B (Formerly Target G*): Collect and consider data. (DOK 1, 2)	Priority	1
7.GM.A (Formerly Target E): Draw, construct, and describe geometrical figures and describe the relationship between them. (DOK 1, 2) **7.GM.B** (Formerly Target F*): Solve mathematical problems in authentic contexts involving angle measure, area, surface area, and volume. (DOK 1, 2)	Supporting	1 – 2
7.RP.B (Formerly Target I): Investigate chance processes and develop, use, and evaluate probability models. (DOK 1, 2) **7.DR.A**: Formulate statistical investigative questions. (DOK 1) **7.DR.C**: Analyze, summarize, and describe data. (DOK 2) **7.DR.D** (Formerly Target H*): Interpret data and answer investigative questions. (DOK 1, 2)	Supporting	1 – 2

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Grade 7 OSAS Mathematics CAT Blueprint[†]

Claims 2 – 4 Grade 7 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions. **Target G**: In Grades 6 – HS, determine conditions under which an argument does and does not apply.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 7 OSAS Math CAT Blueprint

Grade 8 OSAS Mathematics CAT Blueprint[†]

Claim 1: Concepts and Procedures Grade 8 Assessment Target Sets^	Target Set Designation	Number of Items in Target Set
8.AEE.A (Formerly Target B): Work with radicals and integer exponents. (DOK 1, 2) **8.AEE.B** (Formerly Target C): Understand the connections between proportional relationships, lines, and linear equations. (DOK 1, 2) **8.AEE.C** (Formerly Target D): Analyze and solve linear equations and pairs of simultaneous linear equations. (DOK 1, 2)	Priority	3
8.AFN.A (Formerly Target E): Define, evaluate, and compare functions. (DOK 1, 2) **8.AFN.B** (Formerly Target F): Use functions to model relationships between quantities. (DOK 1, 2)	Priority	2 – 3
8.GM.A (Formerly Target G): Understand congruence and similarity using physical models, transparencies, or geometry software. (DOK 1, 2)	Priority	1
8.DR.D (Formerly Target J*): Interpret data and answer investigative questions. (DOK 1, 2)	Priority	0 – 1
8.NS.A (Formerly Target A): Know that there are numbers that are not rational, and approximate them by rational numbers. (DOK 1, 2)	Supporting	1
8.GM.B (Formerly Target H): Understand and apply the Pythagorean Theorem. (DOK 1, 2) **8.GM.C** (Formerly Target I): Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. (DOK 1, 2)	Supporting	1
8.DR.A Formulate statistical investigative questions. (DOK 1, 2) **8.DR.B** Collect and consider data. (DOK 1, 2) **8.DR.C** Analyze, summarize, and describe data. (DOK 1, 2)	Supporting	1

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Grade 8 OSAS Mathematics CAT Blueprint[†]

Claims 2 – 4 Grade 8 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions. **Target G**: In Grades 6 – HS, determine conditions under which an argument does and does not apply.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 8 OSAS Math CAT Blueprint

Grade 11 OSAS Mathematics CAT Blueprint†

Claim 1: Concepts and Procedures Grade 11 Assessment Target Sets^	Target Set Designation	Number of Items in Target Set
HS.AEE.A: Use algebraic reasoning to rewrite expressions in equivalent forms. (DOK 1, 2) **HS.AEE.D**: Make predictions in different applications using expressions, equations, and inequalities to analyze authentic contexts. (DOK 1, 2)	Priority	2 – 3
HS.AFN.A: Describe functions by using both symbolic and graphical representations. (DOK 1, 2, 3) **HS.AFN.C**: Represent functions graphically and interpret key features in terms of the equivalent symbolic representation. (DOK 1, 2) **HS.AFN.D**: Model a wide variety of authentic situations using functions through the process of making and changing assumptions, assigning variables, and finding solutions to contextual problems. (DOK 1, 2, 3)	Priority	2 – 3
HS.GM.C: Solve problems and interpret solutions of area and volume of shapes by applying concepts of congruence, similarity, symmetry in authentic contexts. (DOK 1, 2) **HS.GM.D**: Apply concepts of right triangle trigonometry in authentic contexts to solve problems and interpret solutions. (DOK 1, 2)	Priority	2
HS.DR.B: Collect and consider data. (DOK 1, 2) **HS.DR.C**: Analyze, summarize, and describe data. (DOK 1, 2)	Priority	2
HS.AEE.B: Use algebraic reasoning to find solutions to an equation, inequality, and systems of equations or inequalities. (DOK 1, 2) **HS.AEE.C**: Analyze the structure of an equation or inequality to determine an efficient strategy to find and justify a solution. (DOK 1, 2) **HS.AFN.B**: Compare and relate functions using common attributes. (DOK 1, 2)	Supporting	2
HS.NQ.A: Understand and apply the real number system. (DOK 1, 2) **HS.NQ.B**: Attend to units of measurement needed to solve problems through quantitative reasoning and mathematical modeling. (DOK 1, 2)	Supporting	2
HS.GM.A: Apply geometric transformations to figures through analysis of graphs and understanding of functions. (DOK 1, 2) *HS.GM.B: Construct and communicate geometric arguments through use of proofs, logical reasoning, and geometric technology. (DOK 1, 2)*	*Supporting*	*0***
HS.DR.A: Formulate statistical investigative questions. (DOK 1, 2) *HS.DR.D: Interpret data and answer investigative questions. (DOK 2)* *HS.DR.E: Understand independence and conditional probability and use them to interpret data. (DOK 1, 2)*	*Supporting*	*0***

† Beginning in Grade 6 the Math CAT consists of one segment that includes an embedded Desmos calculator and one segment that does not allow for calculator use, consistent with Smarter Balanced Item Specifications. See the OSAS Mathematics Target Explorer for more information.

^ DOK = Depth of Knowledge. Indicates the range of cognitive complexity of items within a target, consistent with Smarter Balanced Content Specifications.

** Indicates a new target within the 2021 Oregon K-12 Math Standards that will be assessed in a future year.

Grade 11 OSAS Mathematics CAT Blueprint†

Claims 2 – 4 Grade 11 Assessment Target Sets	Claim	DOK of Items	Number of Items in Target Set
Target A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace.	2. Problem Solving	2, 3	0 – 1
Target B: Select and use appropriate tools strategically. **Target C**: Interpret results in the context of a situation. **Target D**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	2. Problem Solving	1, 2, 3	0 – 1
Target A: Apply mathematics to solve problems arising in life, society, and the workplace. **Target D**: Interpret results in the context of a situation.	4. Modeling and Data Analysis	2, 3	0 – 1
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem. **Target E**: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.	4. Modeling and Data Analysis	2, 3, 4	0 – 1
Target C: State logical assumptions being used. **Target F**: Identify important quantities in a practical situation and map out their relationships (i.e., using diagrams, two-way tables, graphs, flow charts, or formulas).	4. Modeling and Data Analysis	1, 2, 3	0 – 1
Total Number of Claim 2 & 4 Items on OSAS Math CAT			**3**
Target A: Test propositions or conjectures with specific examples. **Target D**: Use the technique of breaking an argument into cases.	3. Communicating Reasoning	2, 3	1 – 2
Target B: Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures. **Target E**: Distinguish or correct logic or reasoning from that which is flawed, and – if there is a flaw in the argument – explain what it is.	3. Communicating Reasoning	2, 3, 4	1 – 2
Target C: State logical assumptions being used. **Target F**: Base arguments on concrete referents such as objects, drawings, diagrams, and actions. **Target G**: In Grades 6 – HS, determine conditions under which an argument does and does not apply.	3. Communicating Reasoning	2, 3	1
Total Number of Claim 3 Items on OSAS Math CAT			**4**

End of Grade 11 OSAS Math CAT Blueprint