***Which Standards Does the SBAC Assessment Measure?***

***Summary from SBAC Content Specifications***

**SBAC Alignment to High School Standards**

**Number and Quantity**

*KEY: Claim 1 is red, Claim 2 is blue, Claim 3 is purple, Claim 4 is green. Target letter follows the hyphen.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Real- Number System** | **SBAC Claim-Target** | **Quantities** | **SBAC Claim-Target** | **Complex Number System** | **SBAC Claim-Target** | **Vector and Matrix Quantities** | **SBAC Claim-Target** |
| **N-RN.1** | **1-A**  **3-A thru G** | **N-Q.1** | **1-C**  **2-A thru D**  **4-A thru G** | **N-CN.1** |  | **N-VM.1** |  |
| **N-RN.2** | **1-A**  **3-A thru G** | **N-Q.2** | **2-A thru D**  **4-A thru G** | **N-CN.2** |  | **N-VM.2** |  |
| **N-RN.3** | **1-B**  **3-A thru G** | **N-Q.3** | **2-A thru D**  **4-A thru G** | **N-CN.3** |  | **N-VM.3** |  |
|  |  |  |  | **N-CN.4** |  | **N-VM.4** |  |
|  |  |  |  | **N-CN.5** |  | **N-VM.5** |  |
|  |  |  |  | **N-CN.6** |  | **N-VM.6** |  |
|  |  |  |  | **N-CN.7** |  | **N-VM.7** |  |
|  |  |  |  | **N-CN.8** |  | **N-VM.8** |  |
|  |  |  |  | **N-CN.9** |  | **N-VM.9** |  |
|  |  |  |  |  |  | **N-VM.10** |  |
|  |  |  |  |  |  | **N-VM.11** |  |
|  |  |  |  |  |  | **N-VM.12** |  |

**Algebra**

*KEY: Claim 1 is red, Claim 2 is blue, Claim 3 is purple, Claim 4 is green. Target letter follows the hyphen.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Seeing Structures in Expressions** | **SBAC Claim-Target** | **Arithmetic with Polynomials and Rational Expressions** | **SBAC Claim-Target** | **Creating Equations** | **SBAC Claim-Target** | **Reasoning with Equations and Inequalities** | **SBAC Claim-Target** |
| **A-SSE.1** | **2-A thru D** | **A-APR.1** | **1-F**  **3-A thru G** | **A-CED.1** | **1-G**  **2-A thru D**  **4-A thru G** | **A-REI.1** | **3-A thru G**  **4-A thru G** |
| **A-SSE.2** | **1-D**  **2-A thru D**  **3-A thru G** | **A-APR.2** | **3-A thru G** | **A-CED.2** | **1-G**  **2-A thru D**  **4-A thru G** | **A-REI.2** | **1-H**  **2-A thru D**  **3-A thru G**  **4-A thru G** |
| **A-SSE.3** | **1-E**  **2-A thru D**  **4-A thru G** | **A-APR.3** | **3-A thru G** | **A-CED.3** | **2-A thru D**  **4-A thru G** | **A-REI.3** | **1-I**  **2-A thru D**  **4-A thru G** |
| **A-SSE.4** | **2-A thru D**  **4-A thru G** | **A-APR.4** | **3-A thru G** | **A-CED.4** | **2-A thru D**  **4-A thru G** | **A-REI.4** | **1-I**  **2-A thru D**  **4-A thru G** |
|  |  | **A-APR.5** |  |  |  | **A-REI.5** | **2-A thru D**  **3-A thru G**  **4-A thru G** |
|  |  | **A-APR.6** | **3-A thru G** |  |  | **A-REI.6** | **2-A thru D**  **3-A thru G**  **4-A thru G** |
|  |  | **A-APR.7** |  |  |  | **A-REI.7** | **2-A thru D**  **3-A thru G**  **4-A thru G** |
|  |  |  |  |  |  | **A-REI.8** | **3-A thru G**  **4-A thru G** |
|  |  |  |  |  |  | **A-REI.9** | **3-A thru G**  **4-A thru G** |
|  |  |  |  |  |  | **A-REI.10** | **1-J**  **2-A thru D**  **3-A thru G** |
|  |  |  |  |  |  | **A-REI.11** | **1-J**  **2-A thru D**  **3-A thru G** |
|  |  |  |  |  |  | **A-REI.12** | **1-J**  **2-A thru D** |

**Functions**

*KEY: Claim 1 is red, Claim 2 is blue, Claim 3 is purple, Claim 4 is green. Target letter follows the hyphen.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Interpreting Functions** | **SBAC Claim-Target** | **Building Functions** | **SBAC Claim-Target** | **Linear, Quadratic, and Exponential Models** | **SBAC Claim-Target** | **Trigonometric Functions** | **SBAC Claim-Target** |
| **F-IF.1** | **1-K**  **2-A thru D**  **3-A thru G** | **F-BF.1** | **1-N**  **2-A thru D**  **4-A thru G** | **F-LE.1** |  | **F-TF.1** | **3-A thru G** |
| **F-IF.2** | **2-A thru D** | **F-BF.2** | **1-N**  **2-A thru D**  **4-A thru G** | **F-LE.2** |  | **F-TF.2** | **3-A thru G** |
| **F-IF.3** | **1-K**  **2-A thru D** | **F-BF.3** | **3-A thru G** | **F-LE.3** |  | **F-TF.3** |  |
| **F-IF.4** | **1-L**  **2-A thru D**  **4-A thru G** | **F-BF.4** | **3-A thru G** | **F-LE.4** |  | **F-TF.4** |  |
| **F.IF.5** | **1-L**  **2-A thru D**  **3-A thru G**  **4-A thru G** | **F-BR.5** |  | **F-LE.5** |  | **F-TF.5** | **4-A thru G** |
| **F.IF.6** | **1-L**  **2-A thru D**  **4-A thru G** |  |  |  |  | **F-TF.6** |  |
| **F.IF.7** | **1-M**  **2-A thru D**  **4-A thru G** |  |  |  |  | **F-TF.7** |  |
| **F.IF.8** | **1-M**  **2-A thru D**  **4-A thru G** |  |  |  |  | **F-TF.8** | **3-A thru G** |
| **F-IF.9** | **1-M**  **3-A thru G**  **4-A thru G** |  |  |  |  | **F-TF.9** |  |

**Geometry**

*KEY: Claim 1 is red, Claim 2 is blue, Claim 3 is purple, Claim 4 is green. Target letter follows the hyphen.*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Congruence** | **SBAC Claim-Target** | **Similarity, Right Triangles, and Trigonometry** | **SBAC Claim-Target** | **Circles** | **SBAC Claim-Target** | **Expressing Geometric Properties with Equations** | **SBAC Claim-Target** | **Geometric Measurement and Dimension** | **SBAC Claim-Target** | **Modeling with Geometry** | **SBAC Claim-Target** |
| **G-CO.1** | **3-A thru G** | **G-SRT.1** | **3-A thru G** | **G-C.1** |  | **G-GPE.1** |  | **G-GMD.1** |  | **G-MG.1** | **4-A thru G** |
| **G-CO.2** | **3-A thru G** | **G-SRT.2** | **3-A thru G** | **G-C.2** |  | **G-GPE.2** |  | **G-GMD.2** |  | **G-MG.2** | **4-A thru G** |
| **G-CO.3** | **3-A thru G** | **G-SRT.3** | **3-A thru G** | **G-C.3** |  | **G-GPE.3** |  | **G-GMD.3** | **4-A thru G** | **G-MG.3** | **4-A thru G** |
| **G-CO.4** | **3-A thru G** | **G-SRT.4** | **3-A thru G** | **G-C.4** |  | **G-GPE.4** |  | **G-GMD.4** |  |  |  |
| **G-CO.5** | **3-A thru G** | **G-SRT.5** | **3-A thru G** | **G-C.5** |  | **G-GPE.5** |  |  |  |  |  |
| **G-CO.6** | **3-A thru G** | **G-SRT.6** | **1-O**  **2-A thru D** |  |  | **G-GPE.6** |  |  |  |  |  |
| **G-CO.7** | **3-A thru G** | **G-SRT.7** | **1-O**  **2-A thru D** |  |  | **G-GPE.7** |  |  |  |  |  |
| **G-CO.8** | **3-A thru G** | **G-SRT.8** | **1-O**  **2-A thru D** |  |  |  |  |  |  |  |  |
| **G-CO.9.** | **3-A thru G** | **G-SRT.9** |  |  |  |  |  |  |  |  |  |
| **G-CO.10** | **3-A thru G** | **G-SRT.10** |  |  |  |  |  |  |  |  |  |
| **G-CO.11** | **3-A thru G** | **G-SRT.11** |  |  |  |  |  |  |  |  |  |
| **G-CO.12** |  |  |  |  |  |  |  |  |  |  |  |
| **G-CO.13** |  |  |  |  |  |  |  |  |  |  |  |

**Statistics and Probability**

*KEY: Claim 1 is red, Claim 2 is blue, Claim 3 is purple, Claim 4 is green. Target letter follows the hyphen.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Interpreting Categorical and Quantitative Data** | **SBAC Claim-Target** | **Making Inferences and Justifying Conclusions** | **SBAC Claim-Target** | **Conditional Probability and the Rules of Probability** | **SBAC Claim-Target** | **Using Probability to Make Decisions** | **SBAC Claim-Target** |
| **S-ID.1** | **1-P**  **4-A thru G** | **S-IC.1** | **4-A thru G** | **S-CP.1** | **2-A thru D** | **S-CP.** |  |
| **S-ID.2** | **1-P**  **4-A thru G** | **S-IC.2** |  | **S-CP.2** | **2-A thru D** | **S-CP.** |  |
| **S-ID.3** | **1-P**  **4-A thru G** | **S-IC.3** | **4-A thru G** | **S-CP.3** | **2-A thru D** | **S-CP.** |  |
| **S-ID.4** | **4-A thru G** | **S-IC.4** | **4-A thru G** | **S-CP4.** | **2-A thru D** | **S-CP.** |  |
| **S-ID.5** | **4-A thru G** | **S-IC.5** | **4-A thru G** | **S-CP.5** | **2-A thru D** | **S-CP.** |  |
| **S-ID.6** | **4-A thru G** | **S-IC.6** |  | **S-CP.6** |  | **S-CP.** |  |
| **S-ID.7** | **2-A thru D** |  |  | **S-CP7.** |  | **S-CP.7** |  |
| **S-ID.8** | **2-A thru D** |  |  | **S-CP.8** |  |  |  |
| **S.ID.9** | **2-A thru D** |  |  | **S-CP.9** |  |  |  |

**Smarter Balanced Claims for Math**

* **Claim 1:** **Concepts & Procedures –** Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.
* **Claim 2: Problem Solving –** Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
* **Claim 3: Communicating Reasoning –** Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.
* **Claim 4:** **Modeling and Data Analysis** – Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.

**Smarter Balanced Claims & Targets for Math**

*“m” – denotes major*

*“a/s” denotes additional/supporting*

**Claim 1: Concepts & Procedures –** Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.

* Target A [a/s]: Extend the properties of exponents to rational exponents.
* Target B [a/s]: Use properties of rational and irrational numbers.
* Target C [m]: Reason quantitatively and use units to solve problems.
* Target D [m]: Interpret the structure of expressions.
* Target E [m]: Write expressions in equivalent forms to solve problems.
* Target F [a/s]: Perform arithmetic operations on polynomials.
* Target G [a/s]: Create equations that describe numbers or relationships.
* Target H [m]: Understand solving equations as a process of reasoning and explain the reasoning.
* Target I [m]: Solve equations and inequalities in one variable.
* Target J [m]: Represent and solve equations and inequalities graphically.
* Target K [m]: Understand the concept of a function and use function notation.
* Target L [m]: Interpret functions that arise in applications in terms of a context.
* Target M [m]: Analyze functions using different representations.
* Target N [m]: Build a function that models a relationship between two quantities.
* Target O: Define trigonometric ratios and solve problems involving right triangles.
* Target P [m]: Summarize, represent and interpret data on a single count or measurement variable.

**Claim 2: Problem Solving –** Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.

* **Target A:** Apply mathematics to solve well-posed problems in pure mathematics and those arising in everyday life, society, and the workplace.
* **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 their relationships (e.g., using diagrams, two-way tables, graphs, flowcharts, or formulas).

**Claim 3: Communicating Reasoning –** Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

* **Target A:** Test propositions or conjectures with specific examples.
* **Target B:** Construct, autonomously, 12 chains of reasoning that will justify or refute propositions or conjectures.
* **Target C:** State logical assumptions being used.
* **Target D:** Use the technique of breaking an argument into cases.
* **Target E:** Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.
* **Target F:** Base arguments on concrete referents such as objects, drawings, diagrams, and actions.
* **Target G:** At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)

**Claim 4:** **Modeling and Data Analysis** – Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.

* **Target A:** Apply mathematics to solve problems arising in everyday life, society, and the workplace.
* **Target B:** Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.
* **Target C:** State logical assumptions being used.
* **Target D:** Interpret results in the context of a situation.
* **Target E:** Analyze the adequacy of and make improvements to an existing model or develop a
* mathematical model of a real phenomenon.
* **Target F:** Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flowcharts, or formulas).
* **Target G:** Identify, analyze and synthesize relevant external resources to pose or solve problems.