Grade 3 Smarter Balanced Assessment Item Specifications Fact Sheet

Claim 1 - Target B: Understand properties of multiplication and the relationship between multiplication and division.

Content Domain: Operations and Algebraic Thinking

<mark>Claim 1 Priority Cluster</mark>

Standards Assessed in Target B:

3.OA.5: Apply properties of operations as strategies to multiply and divide. *Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative Property of Multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30 or by 5 x 2 = 10, then 3 x 10 = 30. (Associative Property of Multiplication.) Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive Property.)*

3.OA.6: Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*

Achievement Level Descriptors

Level 1	No Descriptor.
Level 2	Students should be able to apply the Commutative Property of Multiplication to mathematical problems with one-digit factors.
Level 3	Students should be able to apply the Commutative and Associative Properties of Multiplication and the Distributive Property within 100. They should be able to understand the relationship between multiplication and division when solving an unknown factor problem.
Level 4	Students should be able to communicate a deep understanding of the Commutative and Associative Properties of Multiplication, and the relationship between multiplication and division.

Construct-Relevant Vocabulary

divide, equal, equation, expression, factor, multiply, operation, product, quotient

Allowable Stimulus Materials

Area models will be used and should reflect the appropriate property and have a product or dividend within 100 using single-digit factors.