Tulare County Office of Education

Jim Vidak, County Superintendent of Schools

Using SBAC Tools to Support Powerful Instruction

SBAC Math Handout

Smarter Balanced Assessment Consortium

Grade 6

Grade 6 SBAC Math Assessment Snapshot

Unit	Claim 1: Concepts and Procedures 16-19 Total Questions -At least 7 CAT items will be DOK 2 or higher		Claim 2: Problem Solving 8-10 Total Questions -At least 2 CAT items will be DOK 3 or higher -80% of Claim 2 & 4 comes from Standards below	Claim 4: Modeling and Data Analysis 8-10 Total Questions -At least 2 CAT items will be DOK 3 or higher -80% of Claim 2 & 4 comes from Standards below	Claim 3: Communicating Reasoning 8-10 Questions -At least 2 CAT items will be DOK 3 or higher. -80% of Claim 3 comes from standards below.
	Target E (Priority) **6.EE.A** Apply and extend previous understanding of arithmetic to algebraic expressions 6.EE.1, 2, 3, 4	5-6	6.EE.A		6.EE.A 6.EE.3 6.EE.4
	Target F (Priority) **6.EE.B** Reason about and solve one-variable equations and inequalities. 6.EE.5, 6, 7, 8		6.EE.B	6.EE.B	6.EE.B 6.EE.6
	Target A (Priority) **6.RP.A** Understand ratio concepts and use ratio reasoning to solve problems 6.RP.1, 2, 3	3-4	6.RP.A	6.RP.A	6.RP.A 6.RP.3
	Target G (Priority) **6.EE.C** Represent and analyze quantitative relationships between dependent and independent variables. 6.EE.9	**2**	6.EE.C	6.EE.C	6.EE.9
	Target B (Priority) **6.NS.A** Apply and extend previous understandings of multiplication and division to divide fractions by fractions. 6.NS.1		6.NS.A	6.NS.A	6.NS.A 6.NS.1
	Target D (Priority) **6.NS.C** Apply and extend previous understandings of numbers to the system of rational numbers. 6.NS.5, 6, 7, 8	**2**	6.NS.C	6.NS.C	6.NS.C 6.NS.5 6.NS.6 6.NS.7
	Target C (Supporting) **6.NS.B** Compute fluently with multi-digit numbers and find common factors and multiples 6.NS.2, 3, 4	**4-5**			
	Target H (Supporting) **6.G.A** Solve real-world and mathematical problems involving area, surface area, and volume. 6.G.1, 2, 3, 4		6.G.A	6.G.A	
	Target I (Supporting) **6.SP.A** Develop understanding of statistical variability. 6.SP.1, 2, 3			6.SP.A	
	Target J (Supporting) **6.SP.B** Summarize and describe distributions. 6.SP.4, 5			6.SP.B	

<table>
<tr><th></th><th>Item</th><th>Claim (circle one)</th></tr>
<tr><td>A</td><td>Juan has $7\frac{3}{4}$ cups of nuts. He wants to make either banana nut muffins or carrot muffins. The table shows how many cups of nuts are needed for each batch.

Amount of Nuts Needed Per Batch of Muffins
<table><tr><th>Muffin Type</th><th>Amount of Nuts per Batch</th></tr><tr><td>Banana nut</td><td>$\frac{1}{2}$ cup</td></tr><tr><td>Carrot</td><td>$\frac{5}{8}$ cup</td></tr></table>Juan decided to make only carrot muffins. What is the maximum number of whole batches of carrot muffins Juan can make with $7\frac{3}{4}$ cups of nuts?

Enter your answer in the response box.</td><td>1 2 3 4</td></tr>
<tr><td>B</td><td>Example Stem: Select all the statements that correctly describe the expression $4^3 \bullet (8w - 7)$.

A. 3 is a factor of the expression.
B. The difference of 8w and 7 is a factor of the expression.
C. The expression represents the product of 4^3 and $8w - 7$.
D. The expression represents the difference of $4^3 \bullet 8w$ and 7.</td><td>1 2 3 4</td></tr>
<tr><td>C</td><td>Katie and Becca each bought a new book for $50.
• Katie sold her book to the used bookstore for 25% less than the original price.
• Becca sold her book to the used bookstore for 40% less than the original price.

Enter how much more money, in dollars, Katie received for her book than Becca received for her book.</td><td>1 2 3 4</td></tr>
<tr><td>D</td><td>Linh said, "The opposite of 5 is −5. The opposite of $\frac{2}{3}$ is $-\frac{2}{3}$. I think the opposite of a number is always negative."

Linh's claim is not true. Give an example of a number whose opposite is not a negative number.

Enter your answer in the response box.</td><td>1 2 3 4</td></tr>
</table>

Mathematics

Item	DOK Circle one	Comments
#1	1 2 3 4	
#2	1 2 3 4	
#3	1 2 3 4	
#4	1 2 3 4	
#5	1 2 3 4	
#6	1 2 3 4	
#7	1 2 3 4	
#8	1 2 3 4	

Picking a Pet

Your class is trying to decide what type of animal to get for the class pet. Your teacher is letting the class vote to choose a goldfish, a turtle, or a hamster as the class pet.

All 20 students in your class voted for both their 1st choice and their 2nd choice for the class pet. The results are shown in Table 1.

Table 1: Class Pet Votes

Student	1st Choice	2nd Choice	Student	1st Choice	2nd Choice
1	Turtle	Hamster	11	Turtle	Hamster
2	Goldfish	Hamster	12	Turtle	Goldfish
3	Goldfish	Turtle	13	Hamster	Turtle
4	Hamster	Turtle	14	Hamster	Goldfish
5	Goldfish	Turtle	15	Turtle	Goldfish
6	Turtle	Goldfish	16	Goldfish	Turtle
7	Hamster	Goldfish	17	Turtle	Goldfish
8	Turtle	Goldfish	18	Turtle	Goldfish
9	Goldfish	Hamster	19	Turtle	Hamster
10	Goldfish	Hamster	20	Goldfish	Hamster

1

Using the class data shown in **Table 1**, complete the following frequency table.

Pet	Total 1st Choice Votes	Total 2nd Choice Votes
Goldfish		
Hamster		
Turtle		

2

Create your own method for using the votes to decide a winner. Explain your method using the information from **Table 1** to determine the winning pet.

3

Your teacher wants to use a point system to select the winning pet. She wants each pet to get a certain number of points for each 1st choice vote and a certain number of points for each 2nd choice vote.

Your teacher decides to use these rules for her point system:

- Points need to be positive whole numbers.
- Points for a 1st choice vote have to be greater than or equal to the points for a 2nd choice vote.

Determine point values for the 1st and 2nd choice that would result in the **turtle winning.** Use words and numbers to explain how this point system results in the turtle winning.

4

Your classmate claims that there is **no** point system that could result in the goldfish winning. Do you agree or disagree with your classmate?

Use words and numbers to explain your reasoning.

5

Your principal surprises you by buying your class a turtle. He brings the turtle to your class along with a sheet from the pet store titled "Turtle Tank Rules."

The rules state:

- Tank walls must be at least 1 foot tall so the turtle can't climb out.
- There must be at least 400 square inches of floor space for the turtle to walk around on.

Your teacher says the volume of the tank must be smaller than 5000 cubic inches so it doesn't take up too much room in the classroom.

Give the dimensions of a tank that would work for your new turtle. Use words and numbers to explain how your tank satisfies the "Turtle Tank Rules" and your teacher's requirement.

Volume of a rectangular prism = length x width x height

Mathematics Interim Assessment Blocks

Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking	Operations and Algebraic Thinking	Operations and Algebraic Thinking
Number and Operations – Fractions	Number and Operations – Fractions	Number and Operations – Fractions
Measurement and Data	Measurement and Data	Measurement and Data
Number and Operations in Base Ten	Number and Operations in Base Ten	Number and Operations in Base Ten
Geometry*	Geometry	Geometry
Mathematics Performance Task	Mathematics Performance Task	Mathematics Performance Task

Grade 6	Grade 7	Grade 8
Ratios and Proportional Relationships	Ratio and Proportional Relationships	Expressions & Equations I
The Number System	The Number System	Expressions & Equations II (with Prob/Stat)
Expressions and Equations	Expressions and Equations	The Number System*
Geometry	Geometry	Functions
Statistics and Probability	Statistics and Probability	Geometry
Mathematics Performance Task	Mathematics Performance Task	Mathematics Performance Task

High School	
Algebra and Functions I - Linear Functions, Equations, and Inequalities	Geometry Congruence*
Algebra and Functions II - Quadratic Functions, Equations, and Inequalities	Geometry Measurement and Modeling*
Geometry and Right Triangle Trigonometry	Interpreting Functions*
Statistics and Probability	Number and Quantity*
Seeing Structure in Expressions/Polynomial Expressions*	Mathematics Performance Task

*** IAB is new for 2017–18**