

Jim Vidak, County Superintendent of Schools

### Using SBAC Tools to Support Powerful Instruction

## SBAC Math Handout



Grade 5



### **Grade 5 SBAC Math Assessment Snapshot**

	Claim 1: Concepts and Procedures 17-20 Total Questions -At least 7 CAT items will be DOK 2 or higher		Claim 2: Problem Solving	Claim 4: Modeling and Data Analysis	Claim 3: Communicating Reasoning 8-10 Questions	
Unit			8-10 Total Questions -At least 2 CAT items will be DOK 3 or higher -80% of Claim 2 & 4 come from Standards below		-At least 2 CAT items will be DOK 3 or higher80% of Claim 3 comes from standards below.	
	Target E (Priority) Use equivalent fractions as a strategy to add and subtract fractions. 5.NF.1, 2		5.NF.A	5.NF.A	5.NF.1 5.NF.2	
	Target I (Priority) Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. 5.MD.3, 4, 5	5-6	5.MD.C	5.MD.C	5.MD.C 5.MD.5a 5.MD.5b	
	Target F (Priority) Apply and extend previous understandings of multiplication and division to multiply and divide fractions. 5.NF.3, 4, 5, 6, 7	4-5	5.NF.B	5.NF.B	5.NF.B 5.NF.3 5.NF.4 5.NF.7a 5.NF.7b	
	Target D (Priority) Perform operations with multi-digit whole numbers and with decimals to hundredths. 5.NBT.5, 6, 7	3-4	5.NBT.B	5.NBT.B	5.NBT.6 5.NBT.7	
	Target C (Priority) Understand the place value system. 5.NBT.1, 2, 3, 4				5.NBT.2	
	Target J (Supporting) Graph points on the coordinate plane to solve real-world and mathematical problems. 5.G.1, 2		5.G.A	5.G.A		
	Target K (Supporting) Classify two-dimensional figures into categories based on their properties. 5.G.3, 4	2-3			5.G.B 5.G.4	
	Target A (Supporting) Write and interpret numerical expressions. 5.0A.1 5.0A.2					
	Target B (Supporting) Analyze patterns and relationships. 5.0A.3	2				
	Target G (Supporting) Convert like measurement units within a given measurement system. 5.MD.1	۷	5.MD.A	5.MD.A		
	Target H (Supporting) Represent and interpret data. 5.MD.2			5.MD.B		





	Item	Claiı	m (c	ircle	one)
А	A parking meter accepts nickels, dimes, and quarters. It holds up to 1500 coins.  Estimate the value of the coins, in dollars, in the meter when it is full.	1	2	3	4
	Example Stem: Which expression is equal to 16.25 ÷ 2.5?				
В	A. 1.625 ÷ 25 B. 16.25 ÷ 25 C. 162.5 ÷ 25 D. 1625 ÷ 25	1	2	3	4
С	A rectangular box is completely filled with 48 same-sized cubes arranged as shown. Julie opens the top of the box and sees 16 cubes.  Right Side  Julie closes the top and then opens the right side of the box. How many cubes should she see?  Enter your answer in the response box.	1	2	3	4
D	Nina says, "If you multiply a 2-digit number and a 1-digit number, you get a 3-digit number."  Enter numbers in the table to give one example of when Nina's claim is true, and another example that shows her claim is not always true.  Example of when -  2-digit 1-digit 3-digit	1	2	3	4
	Nina's claim is not true number product  Nina's claim is not true				

### **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	



# **Grade 5 Mathematics** *Clay Pottery* Performance Task

#### Clay Pottery

Lizzie and Zela are interested in making pottery. The following chart shows how much clay is needed to make different projects.

Project	Pounds of Clay Needed
Small Plate	$2\frac{1}{2}$
Small Bowl	$1\frac{1}{2}$
Large Bowl	3 <del>1</del> 4
Dinner Plate	$4\frac{1}{2}$
Mug	3 4



# **Grade 5 Mathematics** *Clay Pottery* Performance Task



Which project needs the most clay?

- A. Small Plate
- B. Small Bowl
- C. Large Bowl
- D. Dinner Plate
- E. Mug

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How much more clay, in pounds, is needed to make a large bowl than a small bowl?

pounds



Zela wants to make a set of 6 mugs. The clay **only** comes in 1-pound blocks.



What is the **least** number of blocks of clay Zela will need to make 6 mugs?

Explain how you figured out your answer.

Note: Zela knows that leftover clay from each block can be squished together and used.



## **Grade 5 Mathematics** *Clay Pottery* Performance Task



Lizzie has 12 pounds of clay and wants to use all of it. She does not need to make all of the projects, and may make more than one of any project.

Describe a plan for Lizzie to use 12 pounds of clay making projects from the chart.

Show how you know she will use **exactly** 12 pounds of clay with this plan.



Zela is making a plan to use her 12 pounds of clay. She still wants to make 6 mugs. She also wants to make 6 small bowls.

#### Lizzie says:

"12 pounds is not enough to make 6 mugs and 6 small bowls. I know because I did the math."

#### Zela says:

"It is enough if I make the bowls smaller!"

Make a plan for Zela to use no more than 12 pounds of clay to make 6 mugs and 6 bowls that are **smaller** than the bowls in the chart.

In the plan, state how much clay she should use for each of her smaller bowls. Her bowls should all be the same size.

Zela does **not** care about using **exactly** 12 pounds, but she does want to use as much of the clay as possible.



#### **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	

<sup>\*</sup> IAB is new for 2017-18