



CORE Assessment Module Module Overview

Content Area	Mathematics
Title	School Supplies
Grade Level	Grade 5
Problem Type	Performance Task
Standards for Mathematical Practice	<p>Mathematical Practice 2 (MP2): Reason abstractly and quantitatively.</p> <p>Mathematically proficient students:</p> <ul style="list-style-type: none"> • Make sense of quantities and their relationships in problem situations. • Bring two complementary abilities to bear on problems involving quantitative relationships: <ul style="list-style-type: none"> ○ Decontextualize—to abstract a given situation and represent it symbolically; and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents) and ○ Contextualize—to pause as needed during the manipulation process in order to probe into the referents for the symbols involved). <p>Use quantitative reasoning that entails creating a coherent representation of the problem at hand, considering the units involved, attending to the meaning of quantities (not just how to compute them) and knowing and flexibly using different properties of operations and objects.</p>
Common Core State Standards	<p>5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</p>
SBAC Assessment Claims	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.
Task Overview	Students will solve a series of problems regarding supplies needed for classrooms using the four operations with whole numbers and decimals to hundredths. They will then be asked to look at two ads for local stores and advice the principal of the best way/place to purchase the supplies.
Module Components	1) Scoring Guide 2) Task

School Supplies Scoring Guide

Part	Description	Points	Total Points																											
Credit for specific aspects of performance should be given as follows:																														
1	1. Student gives correct answer: 16 pencils Student work shows an equation, or a drawing of an area model/array. This may include incorrect arithmetic/numbers, but correct process. 2. Student gives correct answer: No, Mr. Burton did not order enough boxes. Some students would only get 4 pens and some would get 5 pens.	1 1 1	3																											
2	3. Student gives correct answer: 12 pencils 4. Student gives correct answer: 2 pens Explanation should include: I divided 228 by 96 students and got 2.25. That gives each student 2 with some left over. This may include incorrect arithmetic but correct process. 5. Student gives correct answer: 36 boxes Student equation should match the situation. 6. Student gives correct answer: \$72.00 Student correctly uses one property of multiplication: <ul style="list-style-type: none"> • $2(30 + 6) = (2 \times 30) + (2 \times 6)$ • $(2 \times 6) \times 6$ 	1 1 1 1 1	5																											
3	7. <table border="1" style="width: 100%; margin: 10px 0;"> <thead> <tr> <th style="text-align: center;">Item</th> <th style="text-align: center;">Discount Supplies</th> <th style="text-align: center;">Office Den</th> </tr> </thead> <tbody> <tr> <td>Pencils</td> <td style="text-align: center;">\$15.00</td> <td style="text-align: center;">\$16.75</td> </tr> <tr> <td>Pens</td> <td style="text-align: center;">\$4.74</td> <td style="text-align: center;">\$4.90</td> </tr> <tr> <td>Paper</td> <td style="text-align: center;">\$3.35</td> <td style="text-align: center;">\$2.85</td> </tr> <tr> <td>Folders</td> <td style="text-align: center;">\$3.22</td> <td style="text-align: center;">\$2.64</td> </tr> <tr> <td>Colored Pencils</td> <td style="text-align: center;">\$54.00</td> <td style="text-align: center;">\$57.60</td> </tr> <tr> <td>Glue Sticks</td> <td style="text-align: center;">\$11.20</td> <td style="text-align: center;">\$4.48</td> </tr> <tr> <td>Boxes</td> <td style="text-align: center;">\$63.36</td> <td style="text-align: center;">\$63.36</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">\$154.87</td> <td style="text-align: center;">\$152.58</td> </tr> </tbody> </table> Student gives correct answers: <ul style="list-style-type: none"> • She will spend \$147.07 if she buys the cheapest supplies from both stores. • She will have \$7.93 left over. 8. Student gives correct answer: Overall, Office Den has the better value because you would spend less if you bought all of the supplies there. 9. Answers may vary, but should require a choice and an argument that supports it.	Item	Discount Supplies	Office Den	Pencils	\$15.00	\$16.75	Pens	\$4.74	\$4.90	Paper	\$3.35	\$2.85	Folders	\$3.22	\$2.64	Colored Pencils	\$54.00	\$57.60	Glue Sticks	\$11.20	\$4.48	Boxes	\$63.36	\$63.36	Total	\$154.87	\$152.58	1 1 1 1 1 1 1 1 1 1 2 2	13
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TOTAL POINTS: (possible points = 21 points)																														

Part 2

Mrs. Armstrong and Mr. Teng, the other two fifth-grade teachers, want to share the supplies with their classes as well. Unfortunately, they didn't order nearly as many pencils and pens as Mr. Burton. They decide to put all of the pencils that were ordered together and divide the pencils between the 3 classrooms evenly. Each classroom has the same number of students and altogether there are 1,152 pencils and 216 pens.

3. How many pencils will each student receive?

4. How many pens will each student receive? Explain how you know this is correct.

5. If the pens come in boxes of 6, how many boxes of pens were ordered? Write an equation for how you could solve this.

6. If the boxes cost \$2.00 a piece, how much did they spend on the pens? Show your work using one of the properties of multiplication.

Part 3




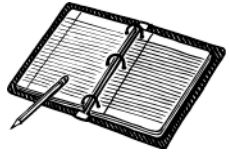
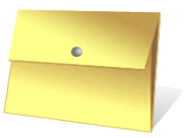
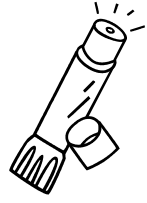








The principal, Mrs. Hernandez, has decided to do all of the ordering next year so that the teachers get an equal number of supplies that they need. She looked at ads from two different stores, Discount Supplies and Office Den, to buy the supplies. She has budgeted \$155 for each room and needs to find the best price so that she can make the money go further. Here is a list of supplies she needs to buy for the classrooms:

- 10 boxes of pencils
- 7 boxes of pens
- 5 packs of lined paper
- 32 folders
- 32 boxes of colored pencils
- 64 glue sticks
- 32 supply boxes for students

7. Determine the cheapest price for each item on the list of school supplies needed. From which store should she buy each school supply? How much money will she have to spend? How much of the \$155 will she have left over, if any?

8. Is one store a better value than the other? Why or why not?

9. If she can choose to order from only one store or from both stores, what should she do? Explain your reasoning by writing an overall summary of your findings.

Discount Supplies			
 <p>Colored Pencils \$2.00 per box or 3 boxes for \$5.00</p>	 <p>Pencils \$1.50 per box</p>	 <p>Pens \$0.79 per box or buy 5 boxes get 1 FREE</p>	 <p>Lined Paper 500 sheet pack Regular Price 67¢</p>
 <p>Folders 11¢ each 10 pack for \$1.00</p>	 <p>Glue Sticks 35¢ each</p>	 <p>Supply Boxes \$1.98 each</p>	<p>BONUS Glue sticks are buy 1, get 1 free!</p>
Office Den			
 <p>Colored Pencils \$1.80 per box</p>	 <p>Pencils \$1.75 per box or 3 boxes for \$5.00</p>	 <p>Pens \$0.70 per box</p>	 <p>Lined Paper 500 sheet pack Regular Price 57¢</p>
 <p>Folders 11¢ each Buy 3 get 1 FREE</p>	 <p>Glue Sticks 35¢ each</p>	 <p>Supply Boxes \$1.98 each</p>	<p>BONUS For every box of pencils you buy, you get 5 free glue sticks</p>