



## CORE Assessment Module Module Overview

<b>Content Area</b>	Mathematics
<b>Title</b>	Window Washers
<b>Grade Level</b>	Grade 3
<b>Problem Type</b>	Performance Task
<b>Standards for Mathematical Practices</b>	<p><b>Mathematical Practice 2 (MP2):</b> Reason abstractly and quantitatively.</p> <p>Mathematically proficient students:</p> <ul style="list-style-type: none"> <li>• Make sense of quantities and their relationships in problem situations.</li> <li>• Bring two complementary abilities to bear on problems involving quantitative relationships:             <ul style="list-style-type: none"> <li>○ 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</li> <li>○ Contextualize—to pause as needed during the manipulation process in order to probe into the referents for the symbols involved).</li> </ul> </li> <li>• 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.</li> </ul>
<b>Common Core State Standards</b>	<p><b>3.OA.1</b> Interpret products of whole numbers.</p> <p><b>3.OA.3</b> Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.</p> <p><b>3.OA.7</b> Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division.</p> <p><b>3.OA.8</b> Solve two-step word problems using the four operations (multiplication or addition).</p> <p><b>3.NBT.3</b> Multiply one-digit whole numbers by multiples of 10 in the range of 10–90, using strategies based on place value and properties of operations.</p>
<b>SBAC Assessment Claims</b>	<b>Claim 2: Problem Solving:</b> Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
<b>Task Overview</b>	In Part 1, students will be asked to solve problems using strategies that include the modeling of multiplication using arrays and relating these models to mathematical equations. In Part 2, students will solve problems that involve multiplying whole numbers by multiples of 10 and arguing/critiquing the reasoning of others. In Part 3, students will provide an argument with evidence to solve a problem.
<b>Module Components</b>	1) Scoring Guide 2) Performance Task

## Window Washers Scoring Guide

Part	Description	Points	Total Points
Credit for specific aspects of performance should be given as follows:			
<b>1</b>	1. Student correctly draws the building faces: 6 x 5 array 2 x 10 array	1 1	2
	2. Student gives correct answer: 30 windows Student gives correct equation: $6 \times 5$	1 1	2
	3. Student gives correct answer: 20 windows Student gives correct equation	1 1	2
<b>2</b>	4. a. Student gives correct answer: Julian = 100 minutes or 1 hour 40 minutes Katie = 120 minutes or 2 hours *Student work may include multiplication facts, concepts, arrays, repeated addition, or drawings	1	3
	b. Student gives correct answer: Julian finished first. Student gives correct explanation (Credit can be given for incorrect arithmetic, but correct process)	1 1	
	5. Student gives correct answer: 120 windows Student gives correct explanation: $5 \times 6 \times 4$ (Credit can be given for incorrect arithmetic, but correct process)	1 1	2
<b>3</b>	6. Student gives correct answer: Julian is wrong. Student gives correct explanation: $2 \times 10 \times 4 = 80$ (Credit can be given for incorrect arithmetic, but correct process)	1 1	2
	7. Student responses may include: <ul style="list-style-type: none"> <li>• an argument that Katie washed more windows (<math>120 &gt; 80</math>)</li> <li>• that Julian washed windows faster (rate of work)</li> <li>• any reasonable explanation with evidence</li> </ul>	1 1	2
<b>TOTAL POINTS:</b> (possible points = 15 points)			



## Window Washers

The Wild Window Washer Company has some big window washing jobs to get done this week and the head window washer, Gary, is out sick. He left the following work order on Monday for his team:

Building 1 – Katie  
6-story building, 5 windows on each floor

Building 2 – Julian  
2-story building, 10 windows on each floor

### Part 1

1. Draw the front of each worker's building, making sure to display the windows.
  
  
  
  
  
  
  
  
  
  
2. How many windows does Katie have to wash on the front of her building? Write an equation to show how you did this problem.
  
  
  
  
  
  
  
  
  
  
3. How many windows does Julian have to wash on the front of his building? Write an equation to show how you did this problem.

**Part 2**

4. a. Katie and Julian race to see who could finish the front of their building the fastest. It took Katie 4 minutes per window. It took Julian 5 minutes per window. How long did it take each worker to finish? Show your work.

b. Who finished first? Explain how you know.

5. If Katie's building has the same number of windows on all four sides, how many windows will she wash in all? Explain how you know.

6. Julian's building also has the same number of windows on all four sides. Julian thinks that he has 130 windows to wash on his building. Is he right or wrong? Explain your answer.

Student Name \_\_\_\_\_

**Part 3**

7. When Gary came back, he wasn't sure what to pay each worker. Write an argument explaining which worker should get paid more money and why.