

Extended-Response Practice – Chapter 3 - PreAlgebra

Demonstrate your knowledge by giving a clear, concise solution to each problem. Be sure to include all relevant drawings and justify your answers. You may show your solution in more than one way or investigate beyond the requirements of the problem. If necessary, record your answer on another piece of paper.

1. Thirty students were surveyed about the number of hours they sleep each week. The results of the survey are shown in the chart below.

Amount of Sleep (hrs)	42-44	45-47	48-50	51-53	54-56
Number of Students	8	4	6	x	y

1

- a. $\frac{1}{15}$ of the students who were surveyed said they slept between 51 and 53 hours and $\frac{1}{3}$ of the surveyed students said they slept between 54 and 56 hours. Solve to find x and y in the table.

- b. If the number of students surveyed represents $\frac{1}{7}$ of the entire school body, how many total students might you predict are in the entire student body?

2. Seams and Hems is a custom sewing center.

- a. The sewing center is making 7 new soccer uniforms for Northmont High School. Each uniform will require $4\frac{5}{8}$ yards of material. Compute the actual amount of material that will be required.

- b. Mr. Ortiz has 40 yards of material that he wants Seams and Hems to make into aprons. Each apron uses $1\frac{3}{4}$ yards of material. Write and solve an equation to find how many aprons can be made.

Extended-Response Rubric

SCORE _____

Score	Description
4	<p>A score of four is a response in which the student demonstrates a thorough understanding of the mathematics concepts and/or procedures embodied in the task. The student has responded correctly to the task, used mathematically sound procedures, and provided clear and complete explanations and interpretations.</p> <p>The response may contain minor flaws that do not detract from the demonstration of a thorough understanding.</p>
3	<p>A score of three is a response in which the student demonstrates an understanding of the mathematics concepts and/or procedures embodied in the task. The student's response to the task is essentially correct with the mathematical procedures used and the explanations and interpretations provided demonstrating an essential but less than thorough understanding.</p> <p>The response may contain minor flaws that reflect inattentive execution of mathematical procedures or indications of some misunderstanding of the underlying mathematics concepts and/or procedures.</p>
2	<p>A score of two indicates that the student has demonstrated only a partial understanding of the mathematics concepts and/or procedures embodied in the task. Although the student may have used the correct approach to obtaining a solution or may have provided a correct solution, the student's work lacks an essential understanding of the underlying mathematical concepts.</p> <p>The response contains errors related to misunderstanding important aspects of the task, misuse of mathematical procedures, or faulty interpretations of results.</p>
1	<p>A score of one indicates that the student has demonstrated a very limited understanding of the mathematics concepts and/or procedures embodied in the task. The student's response is incomplete and exhibits many flaws. Although the student's response has addressed some of the conditions of the task, the student reached an inadequate conclusion and/or provided reasoning that was faulty or incomplete.</p> <p>The response exhibits many flaws or may be incomplete.</p>
0	<p>A score of zero indicates that the student has provided no response at all, or a completely incorrect or uninterpretable response, or demonstrated insufficient understanding of the mathematics concepts and/or procedures embodied in the task. For example, a student may provide some work that is mathematically correct, but the work does not demonstrate even a rudimentary understanding of the primary focus of the task.</p>