MAT.05.CR.2.0000G.A.157 Claim 2

Sample Item ID:	MAT.05.CR.2.0000G.A.157
Grade:	07
Primary Claim:	**Claim 2: Problem Solving** Students can solve a range of well-posed problems in pure and applied mathematics, making productive use of knowledge and problem-solving strategies.
Secondary Claim(s):	Claim 1: Concepts and Procedures Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.
Primary Content Domain:	Number and Operations in Base Ten
Secondary Content Domain(s):	
Assessment Target(s):	2 A: Apply mathematics to solve well-posed problems arising in everyday life, society, and the workplace. 1 F: Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
Standard(s):	5.NF.4
Mathematical Practice(s):	1, 2, 5, 6, 7
DOK:	3
Item Type:	CR
Score Points:	2
Difficulty:	M
Key:	See Sample Top-Score Response.
Stimulus/Source:	
Target-Specific Attributes (e.g., Accessibility Issues):	
Notes:	

Three students created posters for a school election.

Part A

Carolyn created a square-shaped poster. The length of each side of this poster is $1\frac{1}{2}$ feet.

What is the area of this poster, in square feet?

[ ] Square feet

Part B

William created a rectangular poster with the <u>same area</u> as Carolyn's poster. His poster has different dimensions than Carolyn's poster.

What could be the dimensions of William's poster, in feet?

Length= [ ] feet Width= [ ] feet

Sample Top-Score Response:

Part A:

Area is $\frac{9}{4}$ square feet; decimal answers are acceptable for all parts.

Part B:

One possible answer: Length = $\frac{3}{4}$ feet width = 3 feet

Any combination of length and width with a product that yields $\frac{9}{4}$ square feet.

Scoring Note:
Decimal answers are acceptable for all parts of this item.

Scoring Rubric:

Responses to this item will receive 0 - 2 points, based on the following:

2 points: The student has thorough understanding of solving real-world problems involving area of two-dimensional objects. This is shown by the student answering all parts correctly.

1 point: The student has partial understanding of solving real-world problems involving area of two-dimensional objects, but may not have attended to precision. The answer in Part A is correct, but the student makes an error in determining the dimensions of the rectangular poster in Part B. **OR** Part A is incorrect, but Part B dimensions give the same area as Part B.

0 points: The student shows inconsistent or no understanding on how to solve real-world problems involving area of two-dimensional objects.