

Fourth Grade Unit 1: Addition, Subtraction, and Multiplication with Multi-Digit Whole Numbers

Standards Assessed: 4.MD.2, 4.OA.3, 4.NBT.5

Mrs. Williams had the students in her class make “Numbers About Me” posters to tell facts about themselves. Emma, Samantha, and Hayley each made a poster, but they didn’t put their names on the posters. Their posters are shown below.

POSTER A

I went on vacation this summer for 4 weeks.

I have a dog that is 2 years old.

I play the piano for 5 hours each week.

POSTER B

I went on vacation this summer for 3 weeks.

I have a dog that is 2 years old.

I play the piano for 6 hours each week.

POSTER C

I went on vacation this summer for 3 weeks.

I have a dog that is 5 years old.

I play the piano for 6 hours each week.

Emma, Samantha, and Hayley challenged their friends to guess which poster each of them made. They gave their friends the following clues –

Emma: “I went on vacation for 21 days and play the piano for 360 minutes a week.”

Samantha: “My dog is 24 months old and I went on vacation for 28 days.”

Hayley: “I practice the piano for 360 minutes per week my dog is 60 months old.”

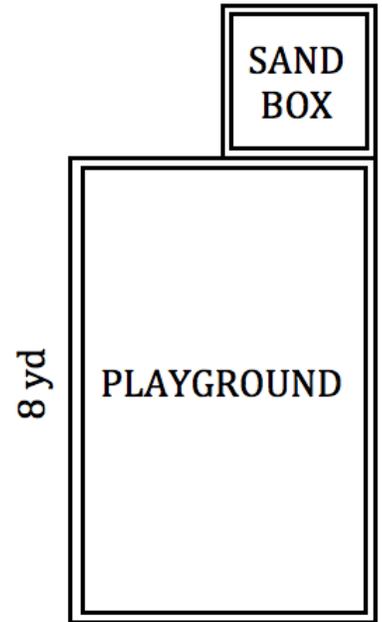
Which girl made each poster? Use the clues to figure out who made each poster and justify your answers below.

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Standards Assessed: 4.MD.3, 4.OA.3, 4.NBT.5

The park in Alyssa's neighborhood had new equipment and play areas added. The picture to the right shows part of the new park.

The new playground space has a length of 8 yards and an area of 48 square yards. Attached to the playground is a square sandbox. The width of the sandbox is half the width of the playground.



What is the length of the sandbox and what is the area of the sandbox?

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Target Standards for Poster Problem: 4.MD.2, 4.OA.3, and 4.NBT.5			
Target Standards for Playground Problem: 4.MD.3, 4.OA.3, 4.NBT.5			
Not yet: Student shows evidence of misunderstanding, incorrect concept or procedure.		Got It: Student essentially understands the target concept.	
<p>1 Below Basic:</p> <p>Little Accomplishment</p> <p>The task is attempted and some mathematical effort is made. There may be fragments of accomplishment but little or no success. Further teaching is required.</p>	<p>2 Basic:</p> <p>Partial Accomplishment</p> <p>Part of the task is accomplished, but there is lack of evidence of understanding or evidence of not understanding. Further teaching is required.</p>	<p>3 Proficient:</p> <p>Substantial Accomplishment</p> <p>Student could work to full accomplishment with minimal feedback from teacher. Errors are minor. Teacher is confident that understanding is adequate to accomplish the objective with minimal assistance.</p>	<p>4 Advanced:</p> <p>Full Accomplishment</p> <p>Strategy and execution meet the content, process, and qualitative demands of the task or concept. Student can communicate ideas. May have minor errors that do not impact the mathematics.</p>
Adapted from Van de Walle, J. (2004) Elementary and Middle School Mathematics: Teaching Developmentally. Boston: Pearson Education, 65			