

Letters: Sidewalk Chalk Letter Area Extension

Introduction:

I use the DesmosClassroom/Amplify Math 6 Curriculum with my 6th graders. The first unit is on area and surface area. The second lesson in the unit is called Letters. I did the [Letters Lesson](#) in class. For homework, I assigned the Letters Worksheet(see below) and I gave each student a 10 x 10 grid along with a letter/number from TOPPERS 24-25(each student had to create their assigned letter/number without curves on their 10 x 10 grid).

This 2 day lesson is an extension of the Letters Lesson where I have groups of students create a 10 x 10 grid on an assigned sidewalk space where they put their letter/number design on the sidewalk in front of our school.

Materials:

- Masking tape
- Sidewalk chalk(at least three colors for each group)
- Meter sticks
- Clipboards for their work

Procedure:

Day 1

1. Correct Letters WS and discuss different strategies/ways for finding the area.
2. Get into groups with other students that have the same letter/number(each student randomly drew a letter/number out of a hat the day before).
3. Each group compares their individual letter/number designs and decides on a group letter/number and design.
4. We discuss the Sidewalk Chalk Letter Area WS(see below).
5. Each group completes one side of this worksheet in class.
6. Each group gets all they need to create their letter/number ready for Day 2(tape, chalk, meter stick, clipboards)so they can begin working immediately on Day 2.

Day 2

1. Each group grabs their things and heads outside
2. Each group creates their 10 x 10 grid with tape, colors their letter/number and then removes the tape.
3. Each group submits a picture of their letter when they have completed their design.
4. Students then complete the backside of the Sidewalk Chalk Letter Area WS where each student chooses 3 other letters/numbers and finds the area of each in two different ways.

Teacher Notes:

- I had students work in groups of 2 or 3.

- I strategically assigned letters to my classes so groups had space between them when working outside.
- I created a folder with photos of ALL the letters/numbers from each group so students could access them and finish the worksheet outside of class.

Resources:

<https://countjoy12.wordpress.com/2020/09/11/math-designed-sidewalk-art/>

<https://teacher.desmos.com/activitybuilder/custom/6029e269b470d50d96ac4b8e?collections=5fff36c7a65b820b3c57bc64%2C5fff83548b9eb944c93914ec>



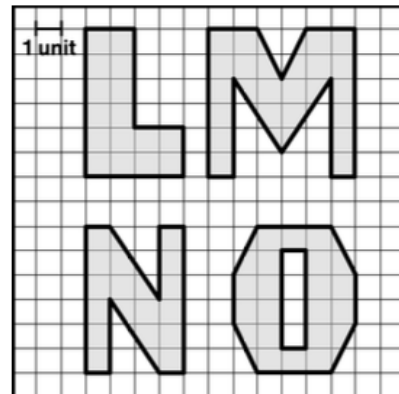


Unit 6.1, Lesson 2: Letters

Name(s) _____

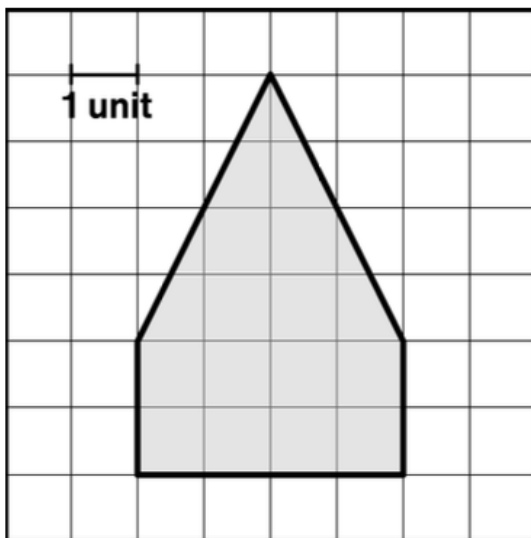
Lesson Synthesis

1. Calculate the area of M. Label the diagram and show your calculations below.



2. Write some advice for someone finding this area.

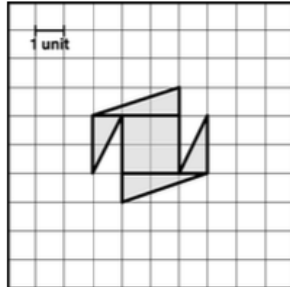
- 3.



What is the area of this shape? Show your thinking!

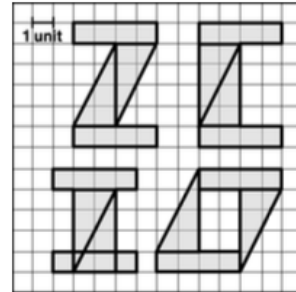
Zola and Zahra drew Z's.

4. What is the area of the shape Zola colored?



5. Select **all** the letters that have the same area as Zahra's "Z".

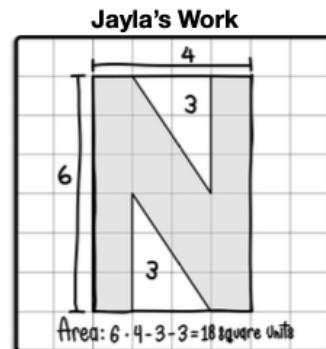
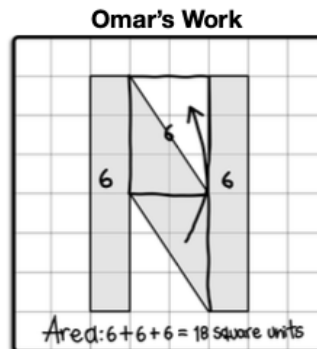
- ☐ C
☐ I
☐ O



Omar and Jayla used different strategies to help Nathan determine the area of his N.

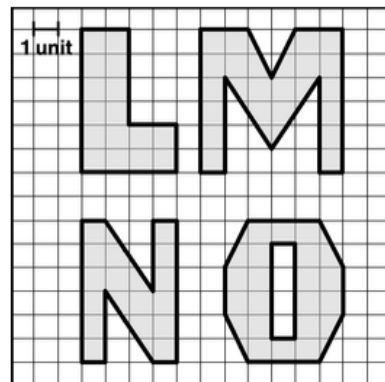
6. Pick one student's work.

Explain how you think they determined the area.



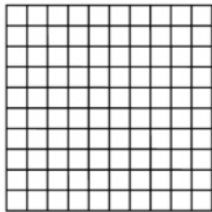
7. Determine the area of each. Show your thinking!

Letter	Area (sq. units)
L	
M	
N	18
O	

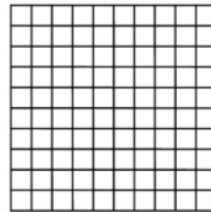


- As a group, decide on a group design for your letter. Remember No Curves!
- Your letter/number must have at least two colors.
- Sketch your letter/number below.
- Sketch your letter again two more times and show how you determined the area. Be creative and efficient!

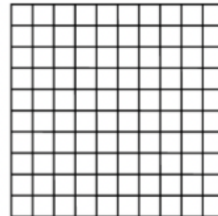
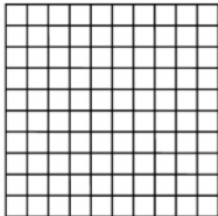
Your collective group letter!



Find the area of your letter!



Find at least one other creative ways to find the area of your letter!!



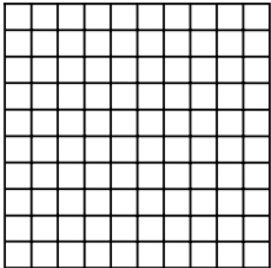
Outside Directions:

- Create a 10 x 10 grid using a ruler and tape.
- Color your letter/number using at least two colors.
- Remove the tape and take a picture.
- On the backside of this worksheet sketch three other letters that are different than yours.
- Find the area of each letter in two different ways.

Sidewalk Chalk Letter Area

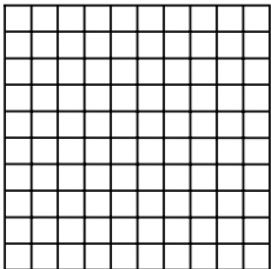
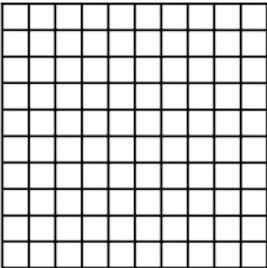
NAME _____

First way to find area:

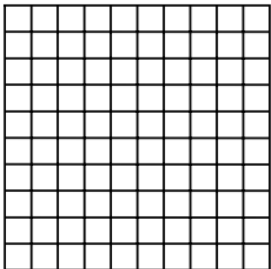
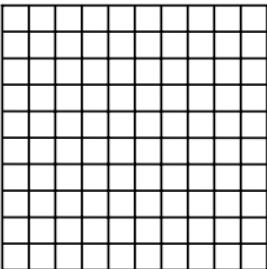


Area of the letter/number:

Second way to find area:



Area of the letter/number:



Area of the letter/number:

