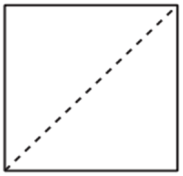
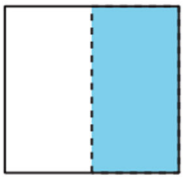
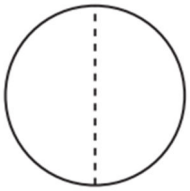
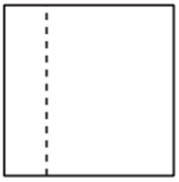
Let's Do Some Math	A  B  C  D 

Standards Unpacking		
Key	**Standard**	**Prerequisites/Vocabulary**
Put a box around the conceptual component of the standard. Underline the procedural/fluency component of the standard. Put a cloud around the application component of the standard.	**3.M.3-** Recognize area as an attribute of plane figures and understand concepts of area measurement.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.3a- A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.3b- A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?

Standards Unpacking		
Key	**Standard**	**Prerequisites/Vocabulary**
Put a box around the conceptual component of the standard. Underline the procedural/fluency component of the standard. Put a cloud around the application component of the standard.	**3.M.4-** Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.5- Relate area to the operations of multiplication and addition.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.5a- Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.5b- Multiply side lengths to find areas of rectangles with whole- number side lengths in the context of solving real-world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?

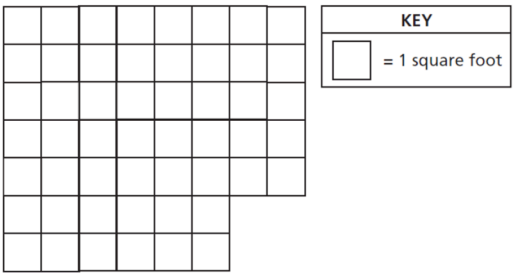
Standards Unpacking		
Key	**Standard**	**Prerequisites/Vocabulary**
Put a box around the conceptual component of the standard. Underline the procedural/fluency component of the standard. Put a cloud around the application component of the standard.	**3.M.5c-** Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.5d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.M.6- Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?
	3.OA.7- Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	What prior knowledge should my students have? What vocabulary/ notation should students know for this standard?

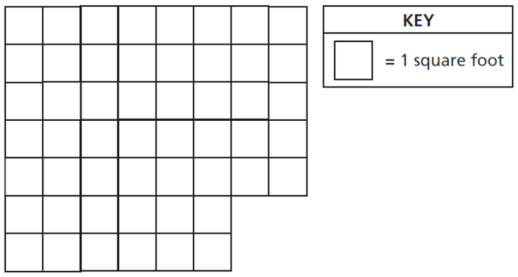
Ms. Chen tiled her kitchen and bathroom floors. The total area of both floors she tiled was 92 square feet. The diagram below shows the tiles on the kitchen floor.

What is the area, in square feet, of the bathroom floor?

Show your work.

KITCHEN FLOOR



S	**Study the Problem** Underline the question. This problem is asking me to find
O	**Organize the Facts** Identify the facts. Eliminate the unnecessary facts. List the necessary facts.
L	**Line up a Plan** Write in words what your plan of action will be. Choose an operation or operations.
V	**Verify Your Plan with Action** Estimate your answer. Carry out your plan. KITCHEN FLOOR 
E	**Examine Your Results** Does your answer make sense? (Compare your answer to the question.) Is your answer reasonable? (Compare your answer to the estimate.) Is your answer accurate? (Check your work.) (SHOW ANOTHER WAY.) Write your answer in a complete sentence.

Directions: Complete this page with your teacher and partner.

9. Have you learned how to find the area of that shape? _____

10. See if you can split the shape into squares using the sticky notes. How many sticky notes fit inside the shape? _____

11. What is the area of each sticky note? _____

12. Add the areas of all the sticky notes. What is the area of the shape?_____

— — — — — — — — — — — — — — — — — — — —

Now let's look at some complex figures on graph paper.

1. Look at Shape 1. How many centimeter squares are inside of the shape?_____

A. How many rectangles can you split it into?__ Color each rectangle a different color.

B. What are the dimensions of the first rectangle?_____

What is the area of the first rectangle?_____

C. What are the dimensions of the second rectangle?_____

What is the area of the second rectangle?_____

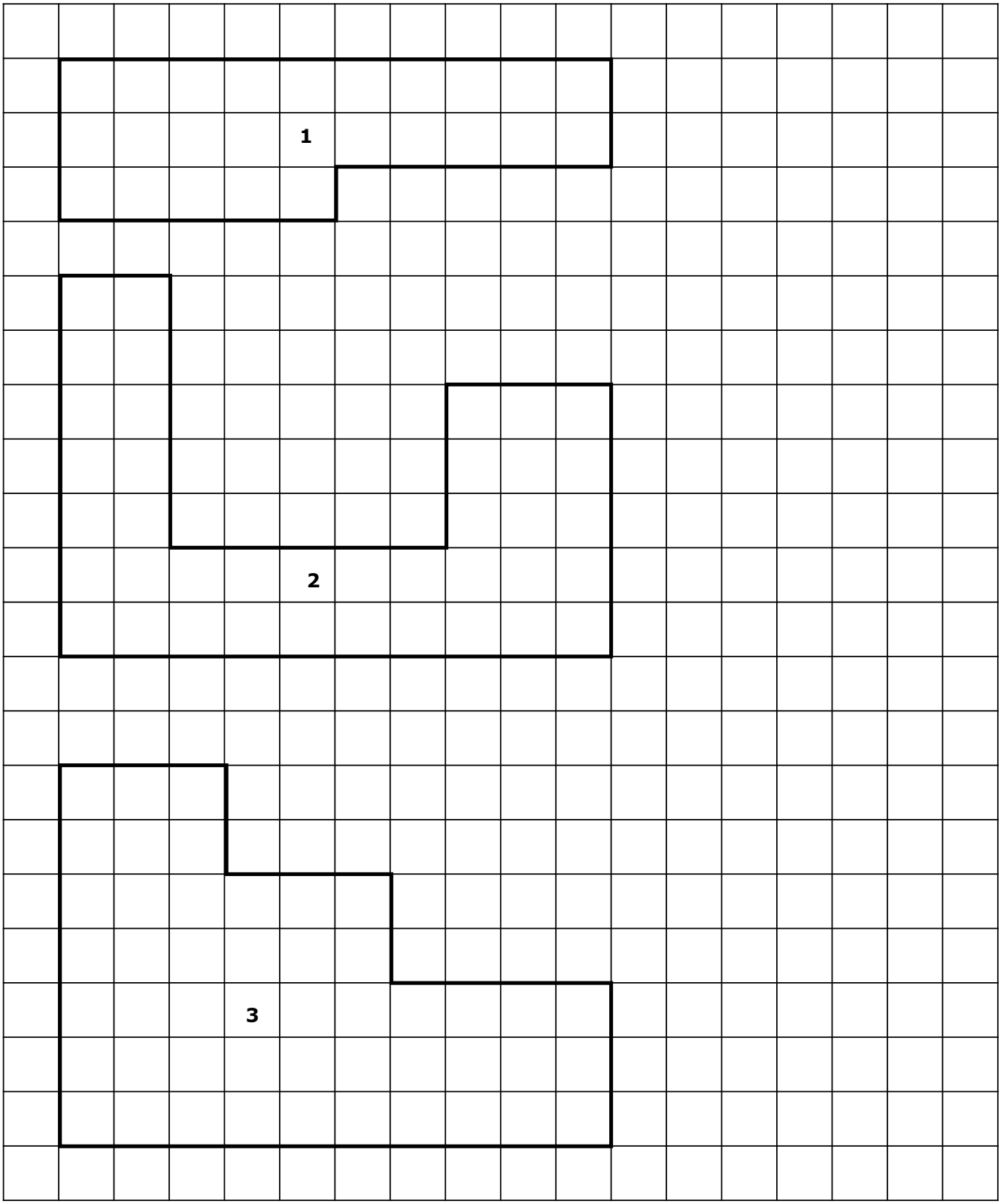
D. Add the areas of the two rectangles together._____

2. Look at Shapes 2 and 3. With your partner, split them into rectangles. Record the dimensions and areas of each rectangle within the original shape in the charts below.

Shape 2	Dimensions (length and width)	Area
Rectangle 1		
Rectangle 2		
Rectangle 3		
	Total Area	

Shape 3	Dimensions (length and width)	Area
Rectangle 1		
Rectangle 2		
Rectangle 3		
	Total Area	

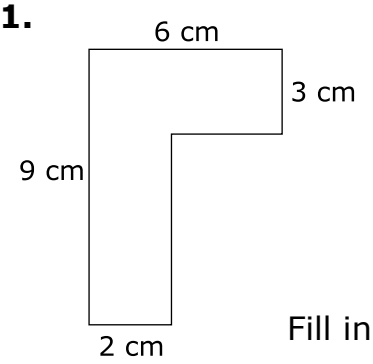
3. Complex figure:_____


1
2
3

Directions: Complete this page with your teacher and partner.

Now let's look at some complex figures that do not have centimeter squares.

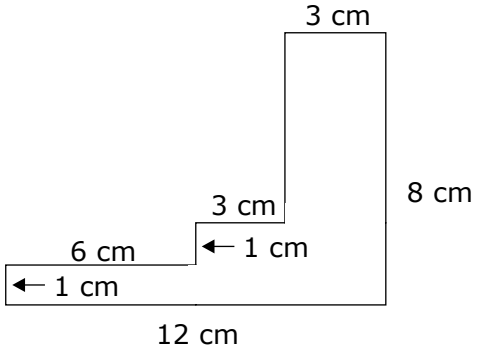
1. How many rectangles can you split the figure into? _____



Fill in the chart with the dimensions and areas.

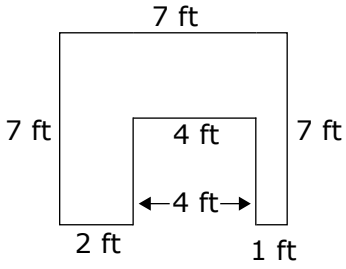
	Dimensions (length and width)	Area
Rectangle 1		
Rectangle 2		
	Total Area	

2. How much wood does Jennifer need to make the runway shown below?



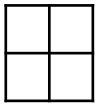
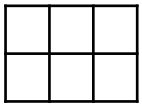
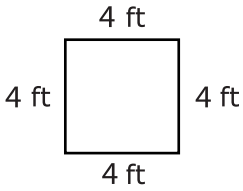
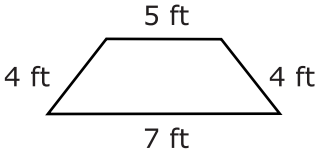
Rectangle 1:
Rectangle 2:
Rectangle 3:
Total Area:

3. The shape below shows the entrance to Fido's dog house. How much paint is needed to cover the entrance?

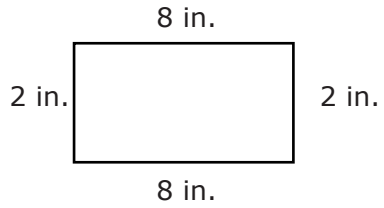
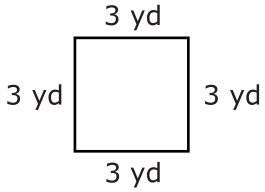
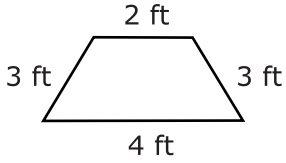


Rectangle 1:
Rectangle 2:
Rectangle 3:
Total Area:

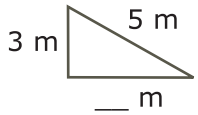
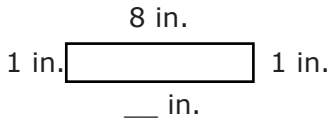
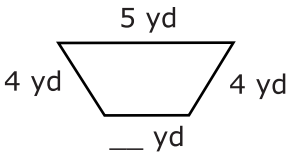
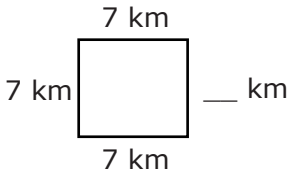
Directions: Complete this page with your teacher and partner.

Picture	Side 1	Side 2	Side 3	Side 4	Perimeter
1. 					
2. 					
3. 					
4. 					
5. Square	6 m	6 m	6 m	6 m	

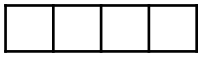
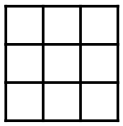
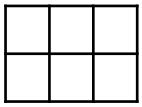
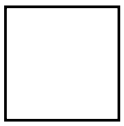
Directions: Complete this page with your partner.

Picture	Side 1	Side 2	Side 3	Side 4	Perimeter
6. 					
7. 					
8. 					
9. Rectangle	10 km	5 km	10 km	5 km	
10. Triangle	7 in.	7 in.	7 in.		

Directions: Complete this page with your teacher and partner.

Picture	Side 1	Side 2	Side 3	Side 4	Perimeter
1. 	3 m	5 m	_____		*P* = 12 m
2. 	8 in.	1 in.	_____	1 in.	*P* = 18 in.
3. 	5 yd	4 yd	_____	4 yd	*P* = 16 yd
4. 	7 km	_____	7 km	7 km	*P* = 28 km
5. Triangle	5 m	5 m	_____		*P* = 16 ft

Directions: Complete this page with your teacher and partner.

Picture	Length	Width	Perimeter, including formula
1. 			
2. 			
3. 			
4. 5 in. 			
5. 9 m  4 m			

Directions: Complete the following SOLVE problem with your teacher. You will only complete the S step.

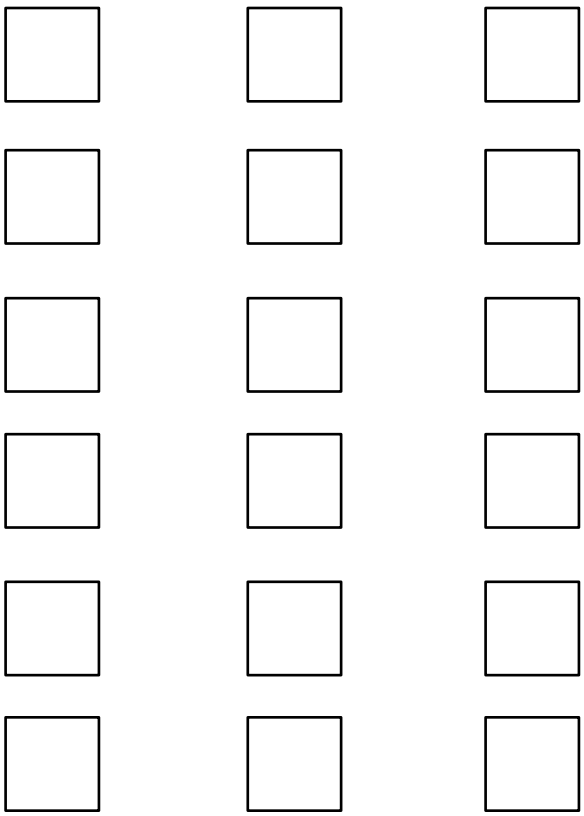
Mario collects football cards. He has 72 cards in his collection. He purchases 1 or 2 cards every time he receives his allowance. He wants to share his collection equally with 7 of his friends. How many football cards will Mario and his friends each have?

S Underline the question.
This problem is asking me to find _____
_____.

Recording Sheet 1

Directions: Complete the recording sheet below with your teacher and partner.

_____ _____



Recording Sheet 2

Directions: Complete the recording sheet below with your teacher and partner.

_____ _____

_____ total item(s) with _____ item(s) in each group = _____ group(s)

_____ total item(s) with _____ item(s) in each group = _____ group(s)

_____ total item(s) with _____ item(s) in each group = _____ group(s)

_____ total item(s) with _____ item(s) in each group = _____ group(s)

_____ total item(s) with _____ item(s) in each group = _____ group(s)

_____ total item(s) with _____ item(s) in each group = _____ group(s)

Recording Sheet 3

Directions: Complete the recording sheet below with your teacher and partner.

_____ _____

_____ total item(s) ÷ _____ item(s) = _____ group(s)

_____ total item(s) ÷ _____ item(s) = _____ group(s)

_____ total item(s) ÷ _____ item(s) = _____ group(s)

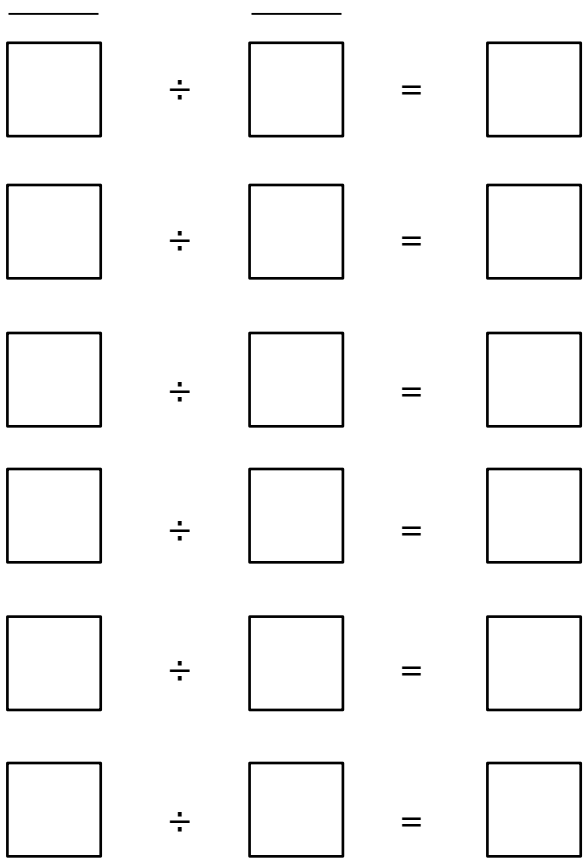
_____ total item(s) ÷ _____ item(s) = _____ group(s)

_____ total item(s) ÷ _____ item(s) = _____ group(s)

_____ total item(s) ÷ _____ item(s) = _____ group(s)

Recording Sheet 4

Directions: Complete the recording sheet below with your teacher and partner.



Fact Masters Curtain

÷	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

Quiz	
Choral Drill	
Certificates	

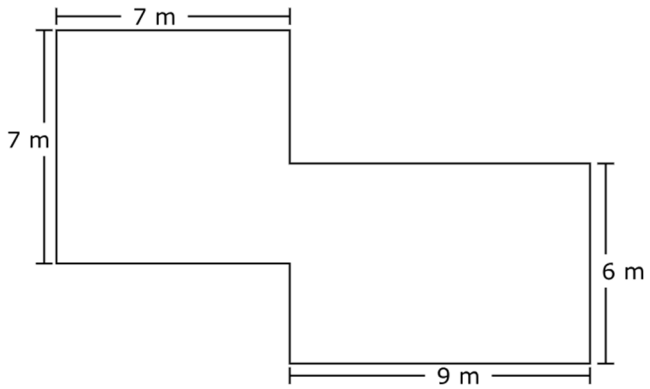
Understanding Modeling Questions Use this sheet as a reflection tool to support the understanding of the evidence statement around the modeling questions. After you engage/learn about the questions, use the tool to make notes around your take aways and implementation ideas.	
Current Unit Topics:	
	Evidence Statement for Modeling
What Content Standards Are Addressed in This Evidence Statement from the Current Unit?	
Takeaways About the Statement – What Do Students Need to Be Able to Do	
What Should Be Evident in a Student Response	

Think Quantities!	Think Structure!	Think Repetition!
What can I count? **What can I measure?** **How are the quantities related?** **How can I represent the quantities so I can see relationships?**	**How is this situation behaving?** **What kind of problem is this?** **Does the problem remind me of another I've solved?** **Will changing the form help?** **How can I chunk this expressions/number/visual?**	**Is there a process that keeps repeating?** **Am I counting /building/drawing in the same way each time?** **Do I keep repeating the same calculations?** **How can I use repetition to write a rule?**

Modeling Question – 3.D.1

Used from: NJ Released Questions – 3.D.1- Operations and Algebraic Thinking - UIN - VF558545

A model of a playground is shown.



Find the area, in square meters, of the playground. Explain your answer using an equation or equations.