Extra Assessment Tasks: Area

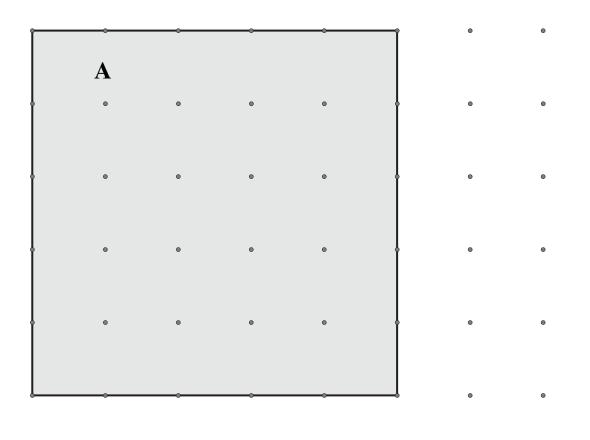
PROBLEM 13

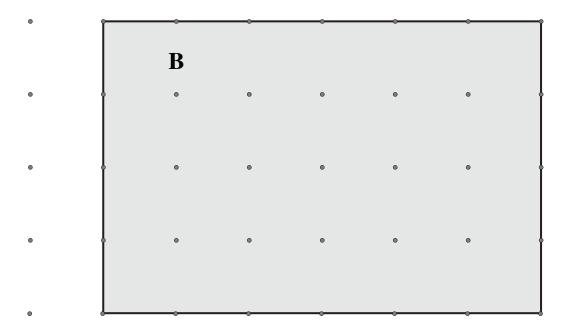
Look at the chocolate bars on the next page.

Which rectangular chocolate bar is bigger and has more to eat? Or are the chocolate bars the same size?

Explain how you found your answer.

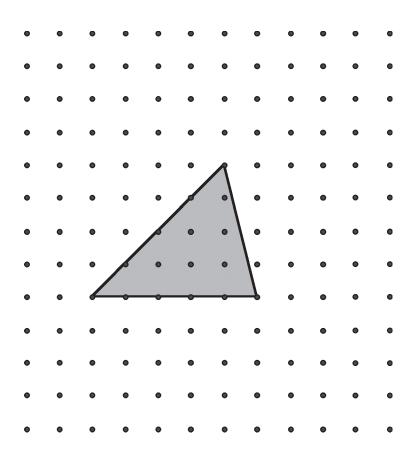
Date _





Name	Date
PROBLEM 14	
How many squares like this does it take to co	ver the inside of the triangle below?

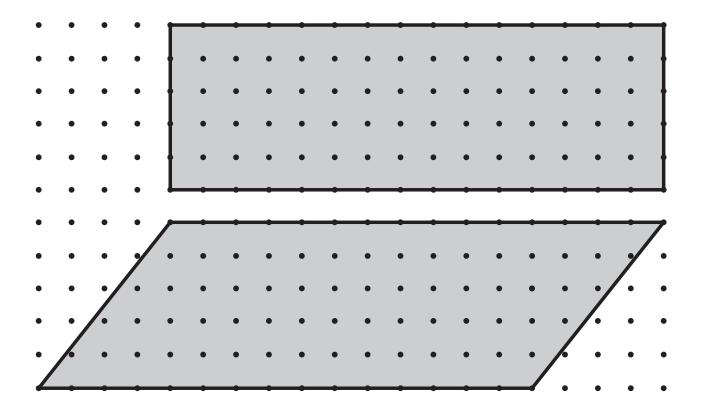
The squares can be cut apart.



Explain your answer.

It takes 100 Allegra stickers to cover the inside of the top shape. How many Allegra stickers does it take to cover the inside of the bottom shape?

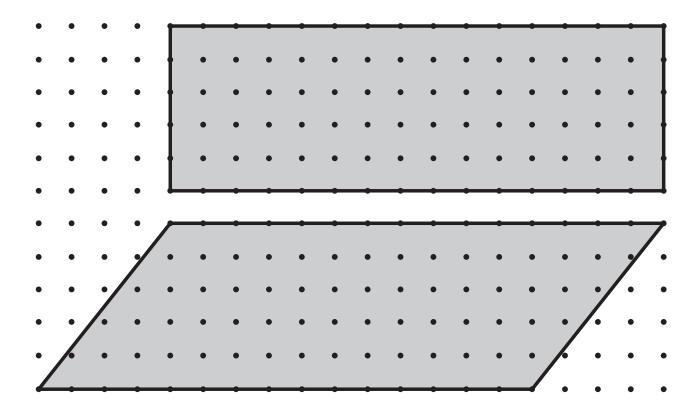
The stickers can be cut apart. Explain your answer.



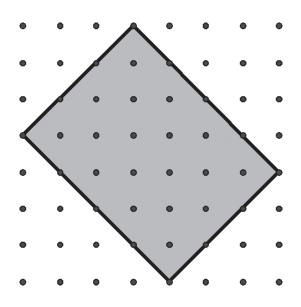
PROBLEM 15P

It takes 15 Allegra stickers to cover the inside of the top shape. How many Allegra stickers does it take to cover the inside of the bottom shape?

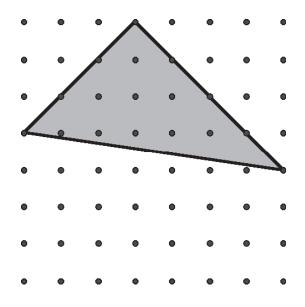
The stickers can be cut apart. Explain your answer.



It takes 24 Batman stickers to cover the inside of this shape. The stickers can be cut apart.

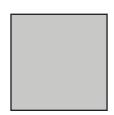


How many Batman stickers does it take to cover the inside of this shape?



Explain your answer.

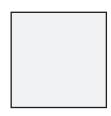
Five gray squares fit across the top of the rectangle. Seven gray squares fit down the right side of the rectangle. How many squares will it take to completely cover the inside of the rectangle? Explain your thinking.



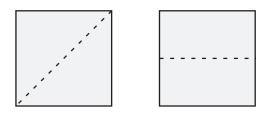
PROBLEM 17 (Continued)

Mary wants to make a fancy chocolate bar out of chocolate squares.

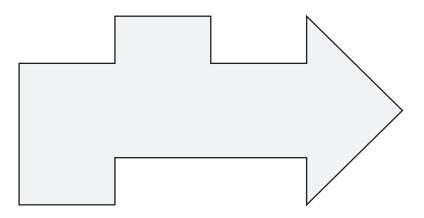
A whole chocolate square looks like this.



The chocolate squares can be cut in half like this or this.



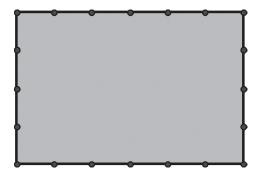
How many whole chocolate squares will it take to make the fancy chocolate bar below?



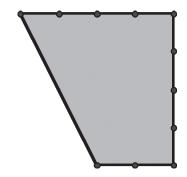
Explain your thinking.

PROBLEM 19

It takes 6 Curious George stickers to cover this shape.



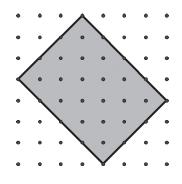
How many Curious George stickers are needed to cover this shape? The stickers can be cut apart.



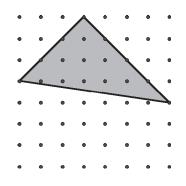
Date _

PROBLEM 20

It takes 36 Batman stickers to cover the inside of this shape. The stickers can be cut apart.



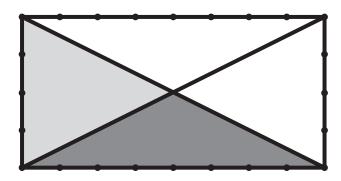
How many Batman stickers does it take to cover the inside of this shape?



Explain your answer.

PROBLEM 21

Explain why the area of the table covered by the black triangle is the same as the area covered by the gray triangle.



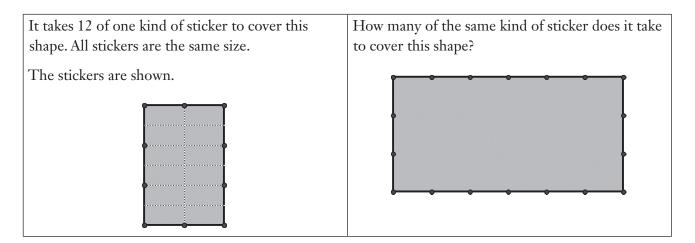
PROBLEM 22

Let's pretend these are two chocolate bars. Mary says that Chocolate Bar A has twice as much chocolate as Chocolate Bar B. What do you think?

Prove your answer is correct.

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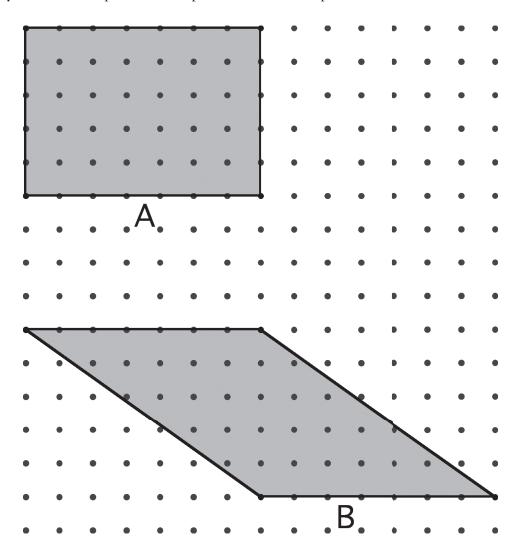
PROBLEM 23



Date _

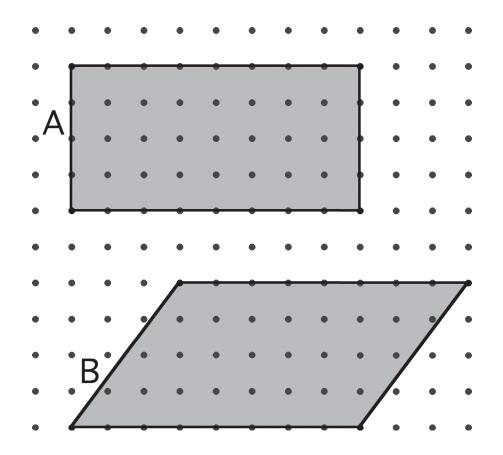
PROBLEM 24

Explain how you can cut Shape A into two pieces that make Shape B.



Which shape covers more of the table top, or do they cover the same amount?

Explain your answer.



Name	
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PROBLEM 26

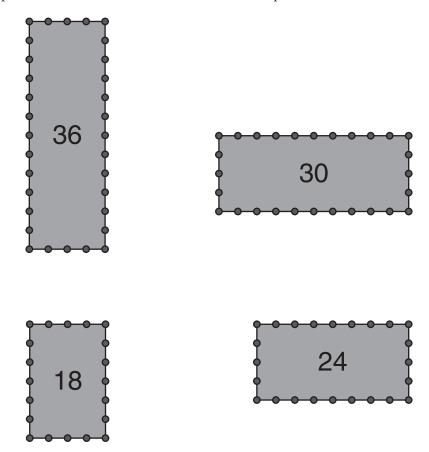
How can you cut Rectangle A apart so that you can make each of Shapes B-E?

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Date _

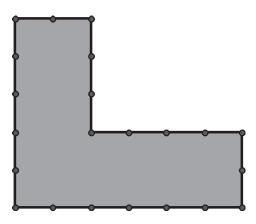
PROBLEM 27

The number of Spider Man stickers it takes to cover each shape is shown.



How many Spider Man stickers will it take to cover this shape?

Explain your answer.



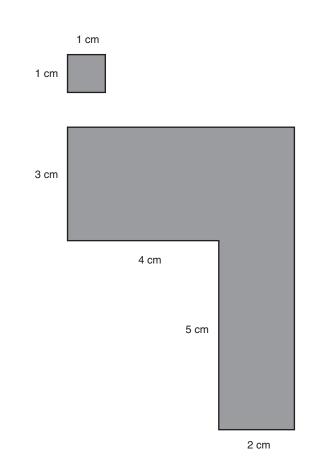
May be photocopied for classroom use. © 2012 by Michael Battista from *Cognition-Based Assessment and Teaching of Geometric Measurement: Building on Students' Reasoning*. Portsmouth, NH: Heinemann.

Name _

Date _

PROBLEM 28

The square is a square centimeter.



How many square centimeters does it take to completely cover the gray shape? Explain how you found your answer.

RECTANGLE TASKS

Show students a square plastic tile and tell them that in Problems 28–37 they will be finding how many square tiles it takes to completely cover the insides of the shapes.

When doing Problems 28–37 with students, the following sequence of steps is useful.

Step 1. Have students predict how many squares it takes to cover the inside of the rectangles, without using tiles and without drawing.

Step 2. Have students draw where they think the squares will go, then make another prediction.

Step 3. Have students check their predictions using square tiles.

Note that even after placing tiles in the rectangles, some students will still have difficulty. For such students, you can have them take the tiles off the rectangle, one at a time, counting as they go. Then ask them again how many tiles it takes to completely cover the inside of the rectangle.

Name		Date						
PROBLEM 29								
]						
How many square tiles like this	L	⊿ are needed t	to cover the recta	angle below?				
Predict without drawing								
Predict after drawing								
Check with square tiles								
								
		I						
<u> </u>		_						

Name		Date					
PROBLEM 30							
How many square tiles like this		are needed to cover the rectangle below?					
Predict without drawing							
Predict after drawing	_						
Check with square tiles							

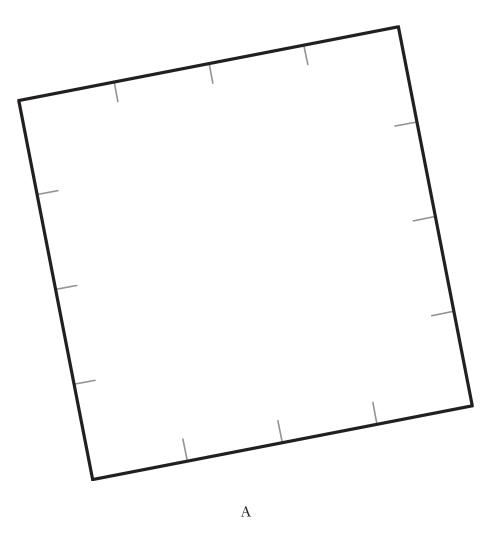
Name	_ Date
PROBLEM 31	are needed to cover the rectangle below?
7 1	6
Predict without drawing	
Predict after drawing	
Check with square tiles	

Which of these two shapes is BIGGER on the inside?

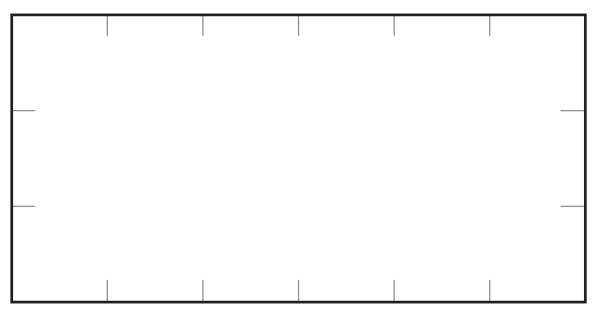
Check your answer with blocks.

Prediction _____

Check _____



PROBLEM 32 (Continued)



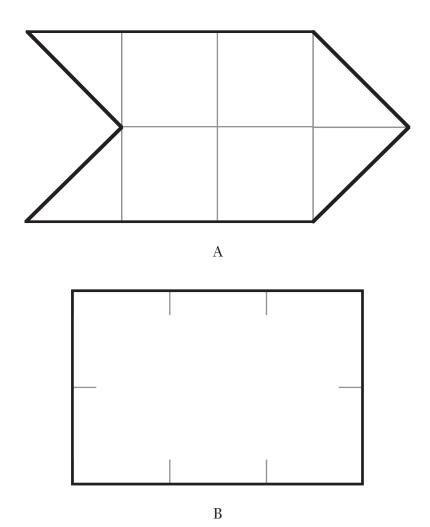
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Date _

PROBLEM 33

Predict which of these two shapes is BIGGER on the inside.

Check your answer with blocks.

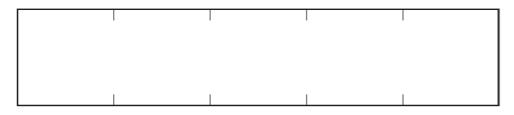


Name_____

Date ___

PROBLEM 34

How many plastic squares does it take to cover the small rectangle?



How many *small rectangles* does it take to cover the large rectangle?

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PROBLEM 34 (Continued)

Predict how many plastic squares it takes to completely cover the inside of the large rectangle below.



Give each student the following page. Explain the problem using an overhead projector or document camera.

Place one row of inch tiles along the inside top of the rectangle and ask:

How many squares does it take to go across the top?

Remove the squares.

Place one column of inch tiles vertically along the middle of the rectangle and ask:

How many squares does it take to go down the middle?

Remove the squares.

 How many squares will it take to cover the whole rectangle?

 Predict an answer; draw then predict, then check your answer with square tiles.

 How many squares does it take to go across the top? ______

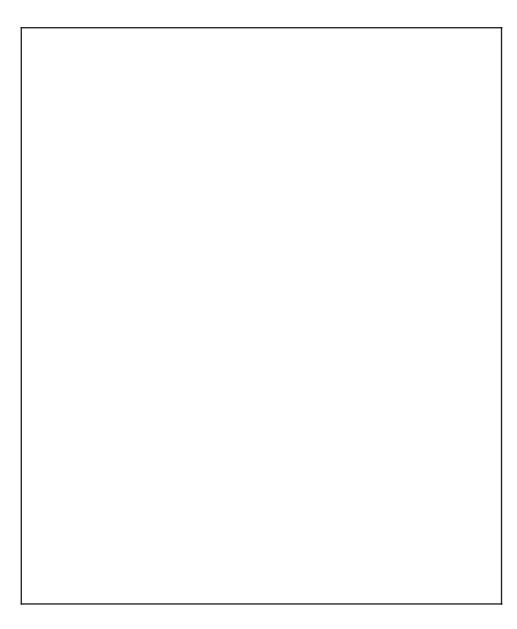
 How many squares does it take to go down the middle? ______

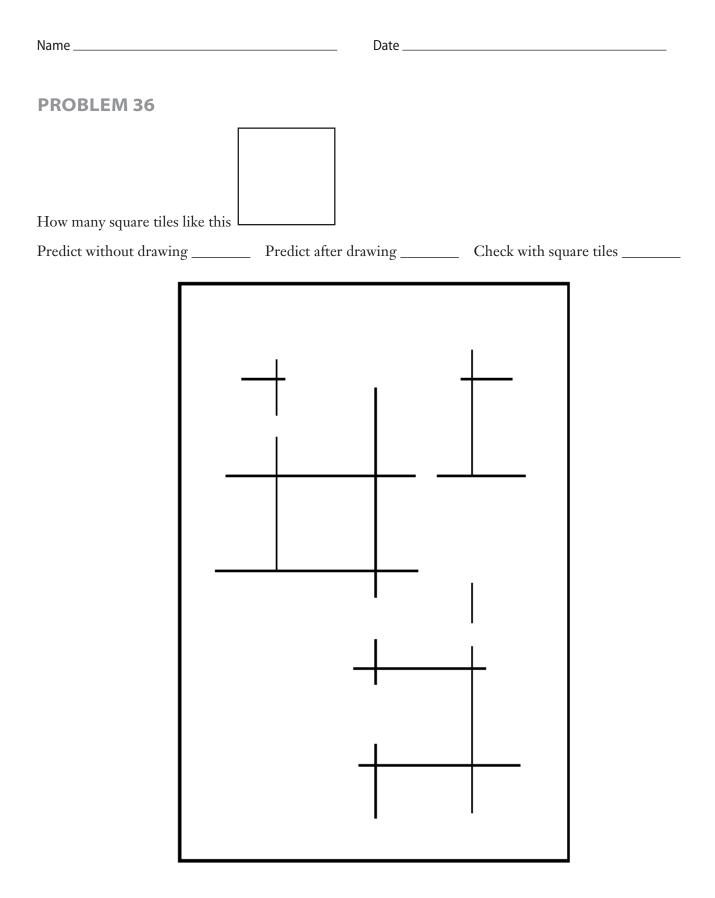
 How many squares will it take to cover the whole rectangle? ______

 Predict without drawing ______
 Predict after drawing _______

 Check with square tiles ______

PROBLEM 35 (Continued)





Name		Date
PROBLEM 37		
How many square tiles like this		are needed to cover the rectangle below?
Predict without drawing		
Predict after drawing	_	
Check with square tiles		

	1	

PROBLEM 38

