

# Math Learning Opportunities: Grade 3



TPS Families:

Attached are three weeks worth of enrichment opportunities to help your child continue thinking critically about mathematics. Activities are standards-based and highlight important topics in math for third grade.

The following page contains a choice board with activities your child can choose to complete on various days. Additionally, you will find some pages labeled in the top left for different days (e.g.: 'Day 1', 'Day 2', etc.). Your child does not have to complete all the pages in one day or in the order presented, this is simply a suggested guide. You will find review activities as well as some choices to be active and get creative. Your child does not have to complete all of the activities, this is meant to enrich their time while they are not at school.

Although access to technology is important, the most robust math learning does not come from calculating, reading, watching videos, or clicking through games. Students learn through doing and then sharing what they have learned. Please talk to your children about these activities and let them tell you about their thought processes and their learning.

Feel free to email me with any questions. Wash your hands and stay healthy!

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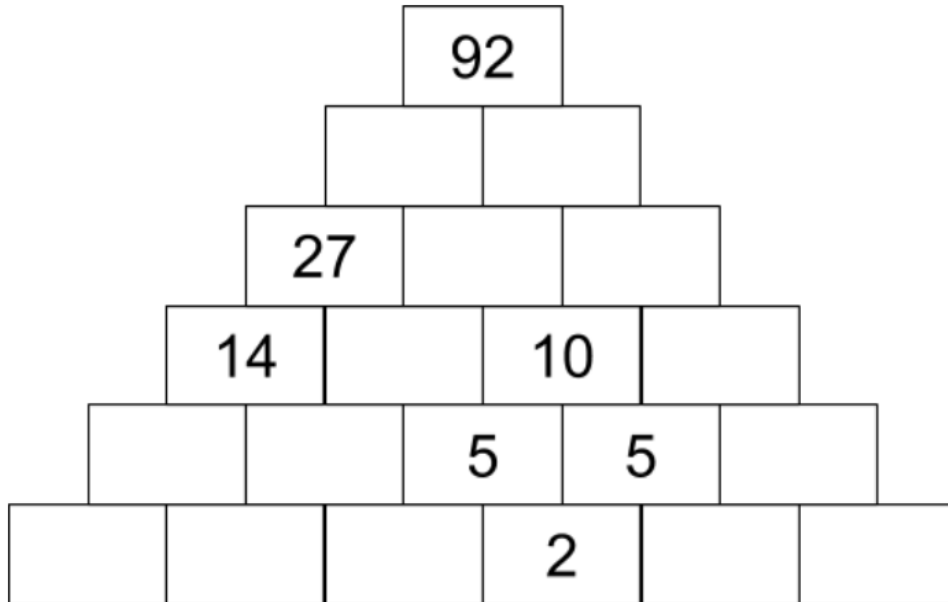
## CHOICE BOARD

Select an activity to complete on different days. Maybe you choose one every Monday or maybe on odd days? Can you create your own choice board?

<p><b>DRAW THE MATH</b></p> <p>Use chalk to write out multiplication or subtraction facts. Use chalk or sticks to draw geometric shapes. Categorize them. For example: quadrilaterals/nonquadrilaterals Some shapes you can draw or build: square, circle, triangle, rectangle, rhombus. Can you think of more?</p>	<p><b>SCAVENGER HUNT</b></p> <p>Outside and around the house. Write out a list of 20 things to find with math connections. Here are a few examples: collect ten blades of grass, collect half the amount of woodchips, find a stick longer than your arm, find four different color leaves, find a rock with a straight edge.</p>
<p><b>DICE OR CARDS</b></p> <p>Do you have dice from a board game? Roll two dice and multiply the numbers you roll. Do you have cards? Use the numbered cards. Play war. Flip two cards, multiply them, the largest product wins.</p>	<p><b>GET PHYSICAL</b></p> <p>You choose: jumping jacks, hop on one foot then the other, push-ups, sit-ups, jump up and down, stretch into high into the air then touch out toes Review your multiplication facts through twelve. For example: <math>7 \times 1</math>; <math>7 \times 2</math>; <math>7 \times 3 \dots 7 \times 12</math></p>
<p><b>CREATE A BOARD GAME</b></p> <p>Do you have a board game you like? Can you create your own board game using what you've learned in math this year?</p>	<p><b>CREATE A SONG OR A POEM</b></p> <p>Create a song or a poem about math. Include five things you've learned in math this year. You can create another for science, reading, social studies, gym, art, and music.</p>

**DAY 1:**

**Part 1: Use Addition and/or Subtraction to fill in the puzzle. The number in each block is the *sum* of the two numbers directly below it.**



**What strategies did you use?**

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**Part 2: Write word problems:**

Write a word problem for this addition equation and then solve it. Show your work!

$$434 + 218 = ?$$

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Write a word problem for this subtraction equation and then solve it. Show your work!

$$434 - 218 = ?$$

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What helped you solve the problem?







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## DAY 2:

Part 1: Skip count with the coins.

<i>quarter</i> - 25¢	<i>dime</i> - 10¢	<i>nickel</i> - 5¢	<i>penny</i> - 1¢
			



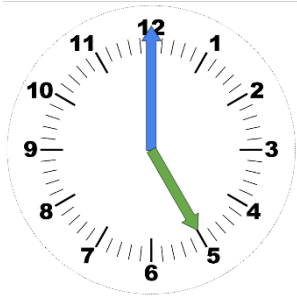
Part 2: Find the total for each group of coins:



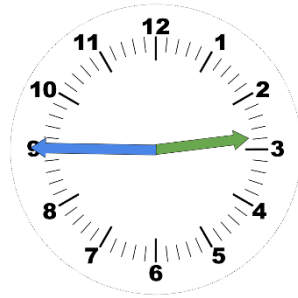
What strategies did you use?

**DAY 3:**

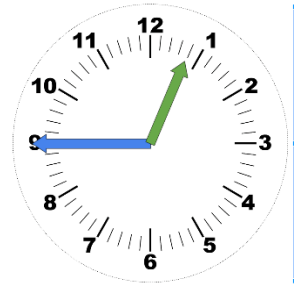
**Part 1: Label each clock with the correct time:**



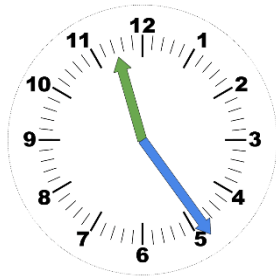
\_\_\_\_\_ : \_\_\_\_\_



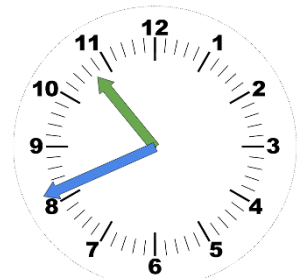
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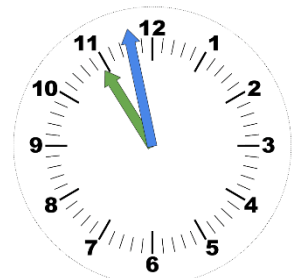
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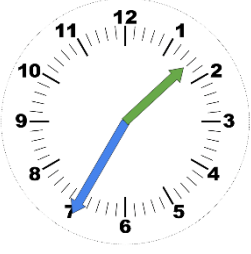
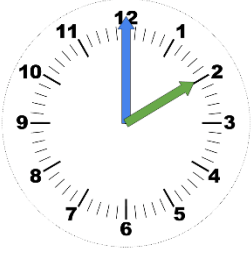

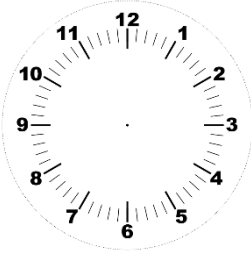
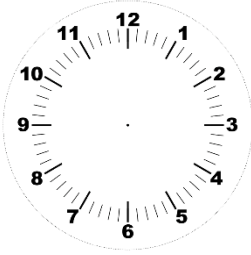

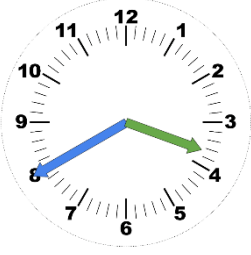
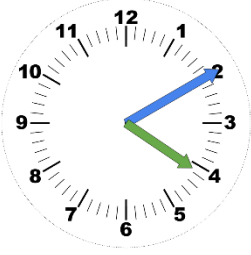


**Answer the questions and show the time on the clock:**

What time is it 5 minutes <b>after</b> 5:05? _____	
What time is it 5 minutes <b>before</b> 6:30? _____	

**Part 2: Show the elapsed time on the clocks and number line:**





Start time	Stop time	Elapsed time
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 _____ : _____	 _____ : _____	
 <b>4:15</b>	 <b>4:52</b>	
 _____ : _____	 _____ : _____	
<p>Recess starts at 10:30 and ends at 10:47. How long is recess?</p>		
<p><b>What strategies did you use?</b></p> <hr/> <hr/> <hr/>		










### DAY 4: Part 1: Circles and Stars

Find the total number of stars in each row. Write a multiplication equation!

	How many circles?	How many stars in each circle?
	<b>4</b>	<b>3</b>
	How many stars altogether?	
	<b><math>4 \times 3 = 12</math></b>	
	How many circles?	How many stars in each circle?
	How many stars altogether?	
	How many circles?	How many stars in each circle?
	How many stars altogether?	
	How many circles?	How many stars in each circle?
	How many stars altogether?	

### Part 2: Patterns in equal groups

	Circles	Stars in each circle	Stars altogether
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	<b>1</b>	<b>5</b>	<b><math>1 \times 5 = 5</math></b>
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether
	Circles	Stars in each circle	Stars altogether

**What patterns do you see?**


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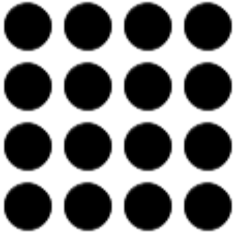
**DAY 5: Part 1: Arrays and Multiplication**

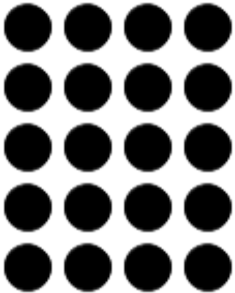
Look at the rows of dots. Each row has 4 dots.  
How many rows are there? How many dots altogether?

	How many rows?	How many dots altogether?
	<b>1</b>	<b><math>1 \times 4 = 4</math></b>

	How many rows?	How many dots altogether?

	How many rows?	How many dots altogether?


	How many rows?	How many dots altogether?


	How many rows?	How many dots altogether?


<p><b>What patterns do you see?</b></p> <hr/> <hr/>
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## Part 2: More arrays

Write a multiplication equation for each array:

	rows	columns	total

	rows	columns	total

	rows	columns	total



	rows	columns	total

What patterns do you see?

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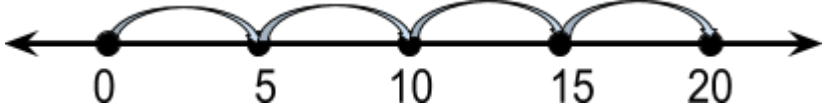

**DAY 6: Part 1: Situations, Groups, Arrays, and Equations,**

For each situation, draw equal groups or an array. Then write an equation

situation	group or array?	equation
4 boxes. 5 apples in each box.		$4 \times 5 = 20$
2 rows of chairs. 4 chairs in each row.		$2 \times 4 = 8$
4 packs of juice. 4 cans in each pack.		
3 bags of balls. 4 balls in each bag.		
5 rows of plants. 3 plants in each row.		
4 people. Each person eats 2 oranges.		
5 dogs. Each dog has 4 legs.		

## Part 2: Patterns with number lines

Draw each multiplication equation as jumps on a number line

equation	Jumps on a number line
$4 \times 5 = 20$	<p>4 jumps. Each jump is 5 long.</p> 



$2 \times 4 = 8$	
$4 \times 4 = 16$	
$3 \times 4 = \underline{\quad}$	
$5 \times 3 = \underline{\quad}$	



What patterns do you see?

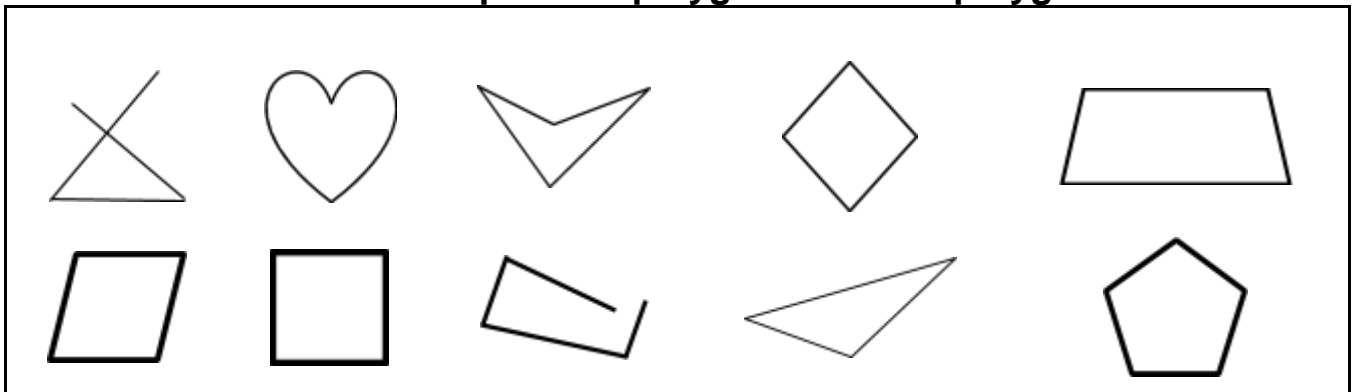
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**DAY 7: Part 1: Sort the shapes into polygons and not polygons:**



				
<b>Polygons</b>		<b>Not Polygons</b>		



**Pick one shape and tell how you know that it is a polygon.**

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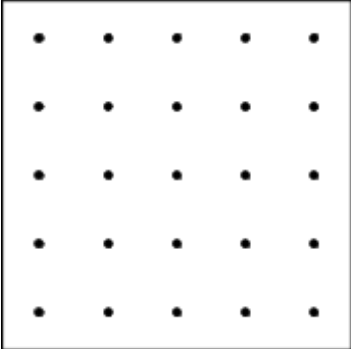
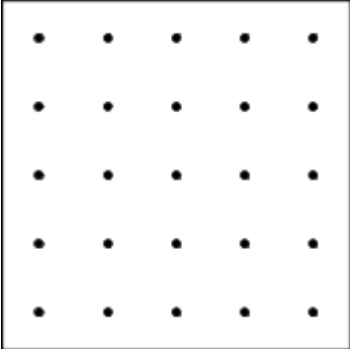
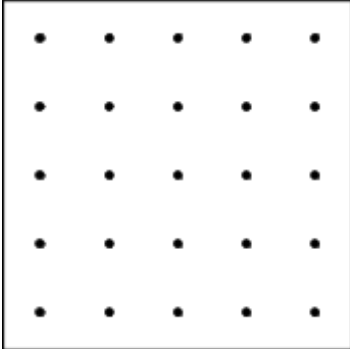


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**Part 2: Draw each shape on the Geoboard:**

		
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**rhombus**

**rectangle**

**square**



**Pick one shape and tell how you know what it is:**

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**Part 3: Describe this shape. Tell about its sides and angles.**



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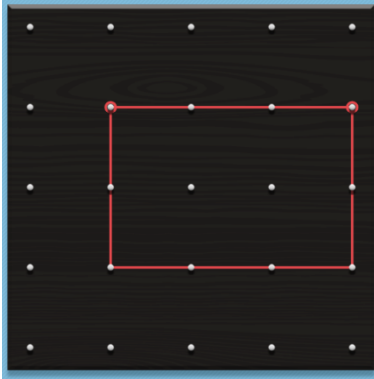
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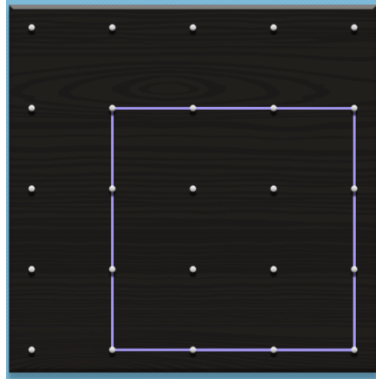
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**DAY 8: Part 1: Find the perimeter of each shape:**

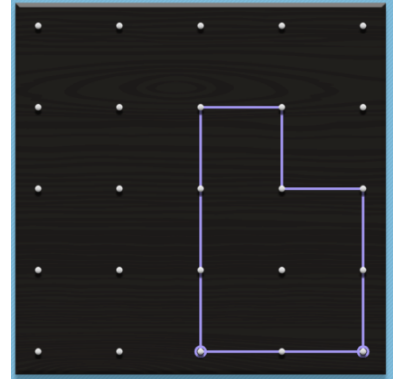
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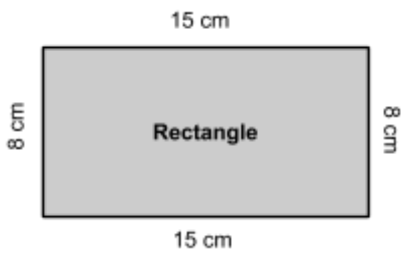
**Perimeter:**  
 $3 + 2 + 3 + 2 = 10$



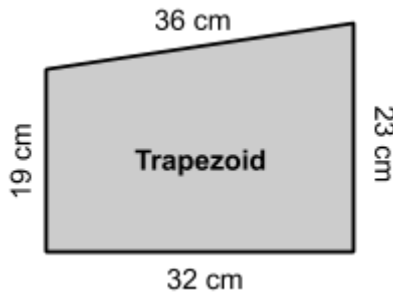
**Perimeter:**



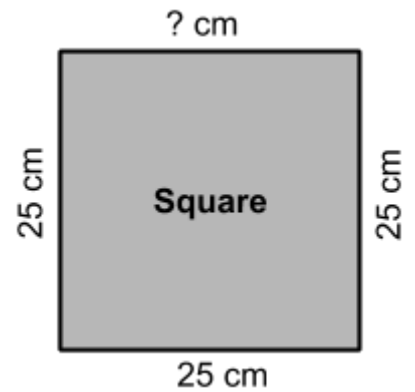
**Perimeter:**



**Perimeter:**



**Perimeter:**



**Perimeter:**

Pick one shape and tell how you found its perimeter.

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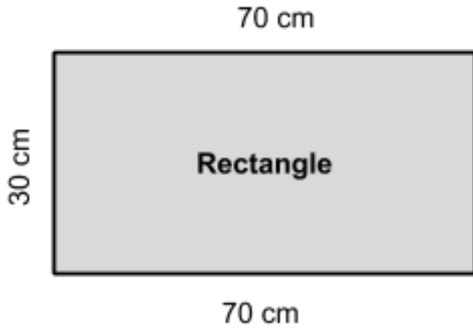


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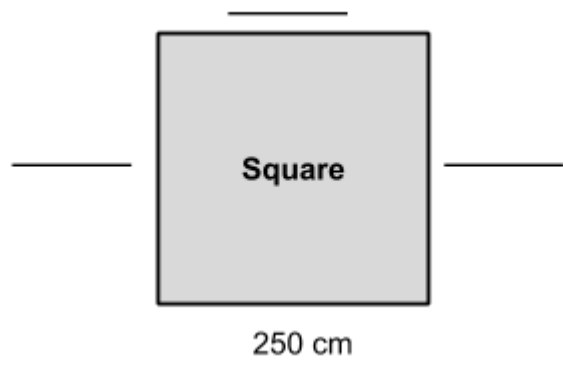
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**Part 2: Find the missing length and/or perimeter:**



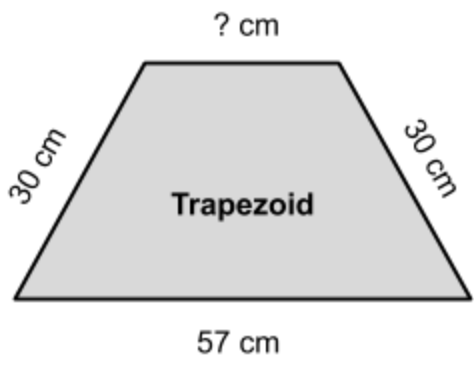
The missing length is \_\_\_\_\_

The perimeter is \_\_\_\_\_



The missing length is \_\_\_\_\_

The perimeter is \_\_\_\_\_



The perimeter is 130 cm.

The missing length is \_\_\_\_\_

**Pick one shape and tell how you found the missing length.**

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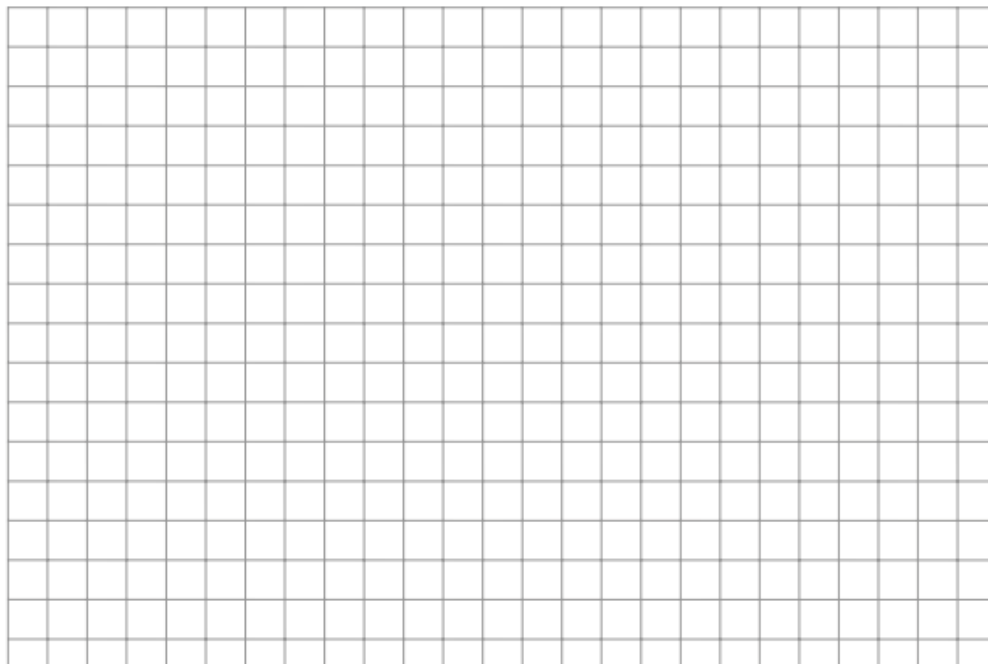
**DAY 9:** Use 24 pennies (or other objects) and make all the possible arrays. Record the number of rows and columns in the table below.



Number of Rows	Number of Columns	Factors	Product
1	24	1, 24	24
			24
			24
			24
			24
			24
			24
			24

List all the factors of 24: \_\_\_\_\_

Choose 1 of the arrays you created with pennies and draw it below.

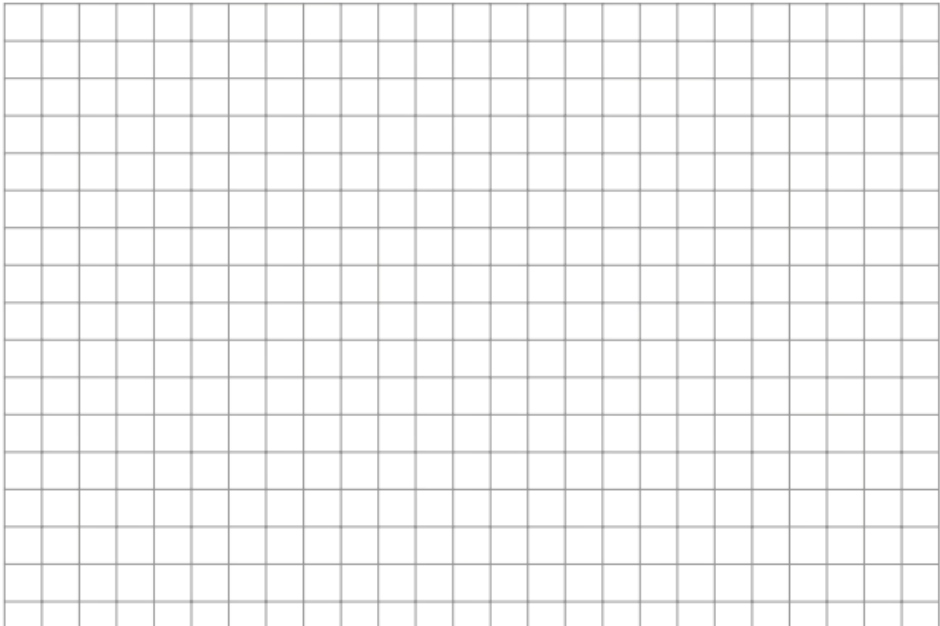


Use 36 pennies or other small objects and make all the possible arrays.

Number of Rows	Number of Columns	Factors	Product

List the factors of 36: \_\_\_\_\_

Choose 1 of the arrays you created with pennies and draw it below.



The multiples of a number are the numbers you get when you multiply by that number. For example:

The multiples of 2 are:

2, 4, 6, 8, 10, 12, 14, 16, 18, 20

List the multiples of 4:

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List the multiples of 8:

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Are there numbers that are multiples of 2 and of 4 and of 8. In other words these numbers are in all three rows.

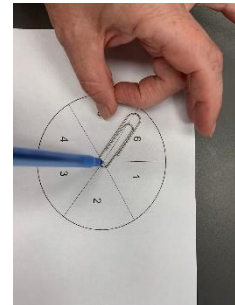
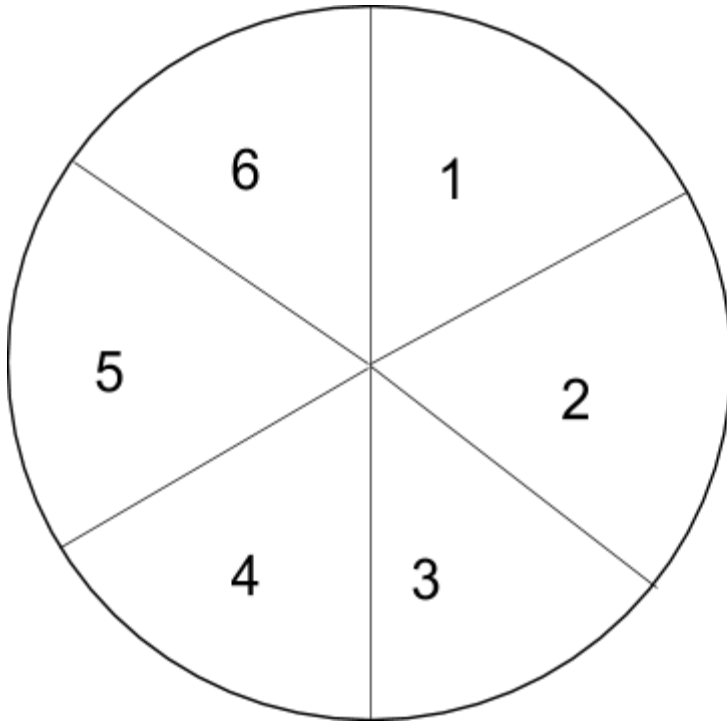
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**DAY 10: Part 1: How Close to 100**





1. Use the spinner to generate two factors for the array.

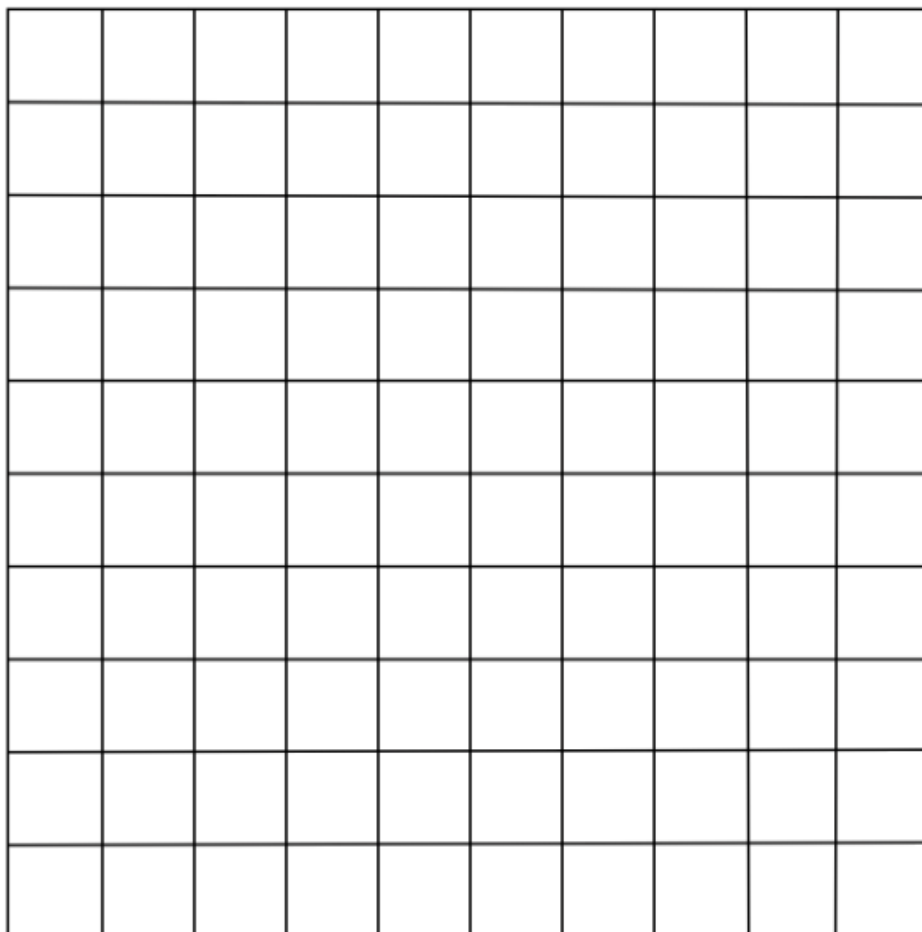


2. Next draw the array on the grid and record the multiplication equation.



The goal is to get as close to 100 as possible by filling in the entire grid with your arrays.

## How Close to 100



1. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
2. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
3. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
4. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
5. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
6. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
7. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
8. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
9. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_
10. \_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

Exploring arrays

Use the 100 grids on the next two pages to draw these array:

1 x 1

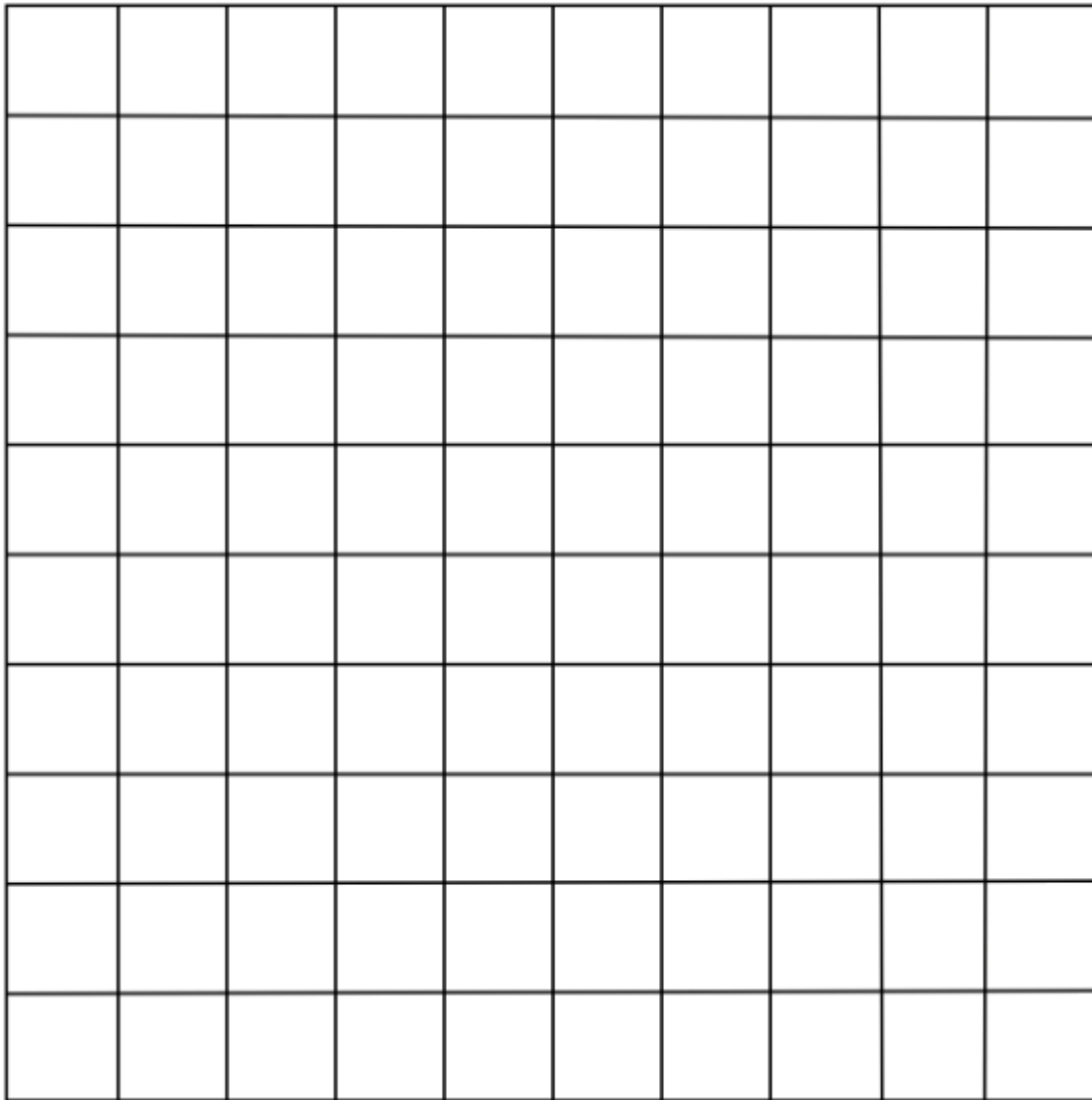
3 x 3

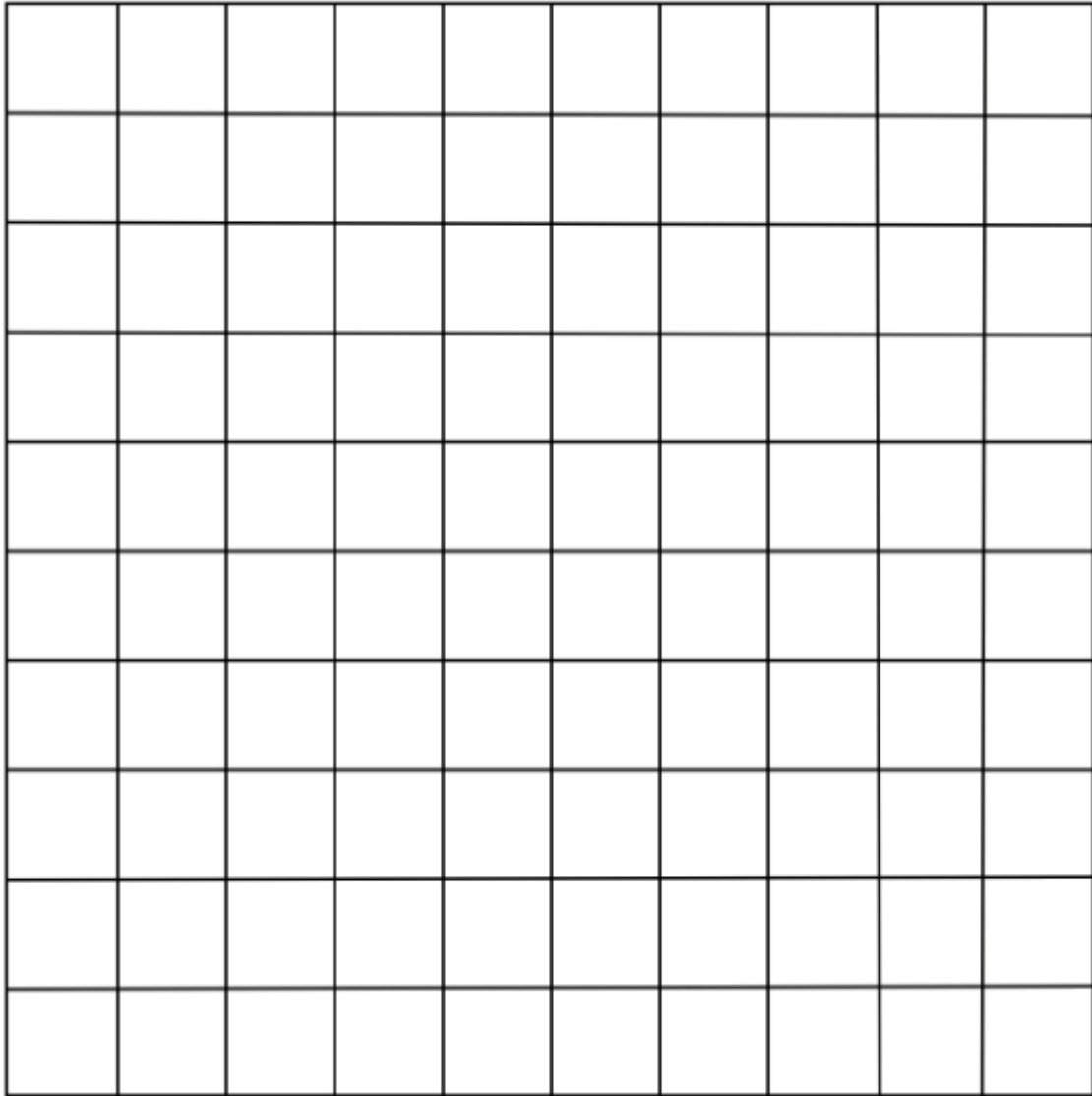
5 x 5

2 x 2

4 x 4

6 x 6





What patterns do notice in these arrays. Without making it what do you know about an 8 x 8 array.

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