MATH ART
Geometric Patterns of Digit Sums of Multiples of One and Eight

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Elementary Math Resources
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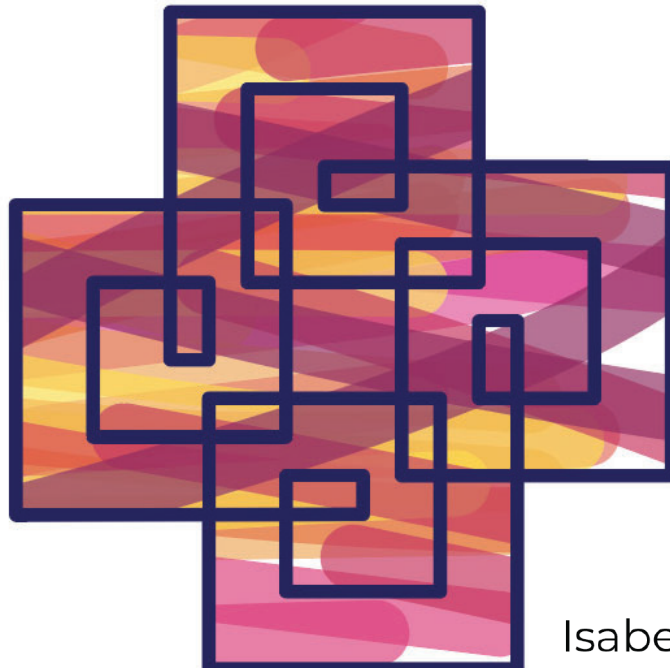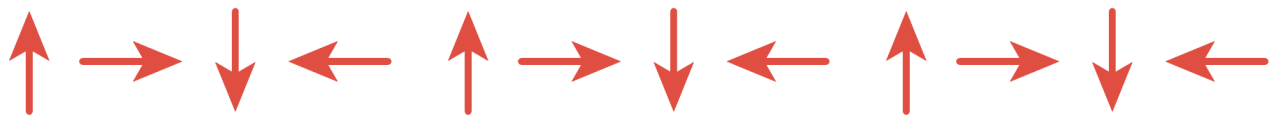
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Director of Education
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In addition to **Colorful Collections**, you will receive a Wednesday morning email with teacher tips, educational ideas, or a free version of whatever I'm working on at the moment. You get to use it for free, and I benefit from your questions and comments.

Also, visit my Teachers Pay Teachers store Uncommon-Core dot com.

Thank you again. All the best,

Isabelle

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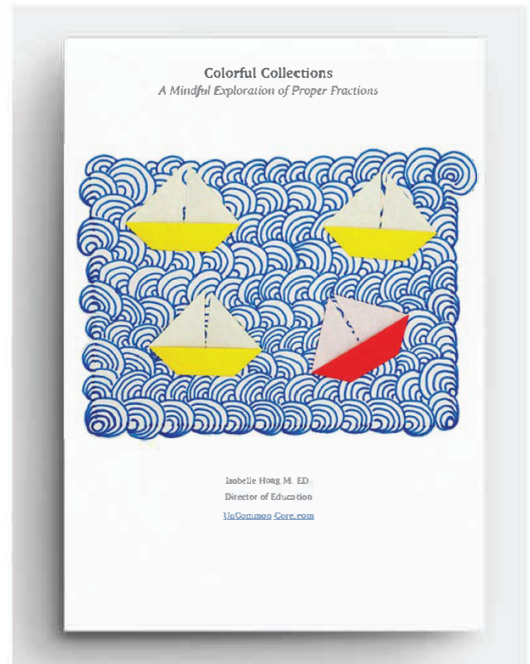
Finding Digit Sums

name:

Just as it sounds, the Digit Sum of a number is the total value of all its digits expressed as a single digit.

Simply add the individual digits, regardless of the value assigned by their place in the number, until you get a single digit answer.

Find the digit sum of 17,865.

First, add the individual digits.

$1 + 7 + 8 + 6 + 5 = 27$

Continue adding until the answer is a single digit number.

$2 + 7 = 9$

The digit sum of 17,865 is 9.

Let's Practice:			
Number	Digit Sum	Number	Digit Sum
5		45	
26		78	
55		26	
53		93	
13		31	
52		40	
81		134	

Explore Digit Sums

name:

Choose two numbers that add to ten. Write them on the lines.

List the multiples of each number from times one to times ten.

Write the digit sums of each list in the column next to it.

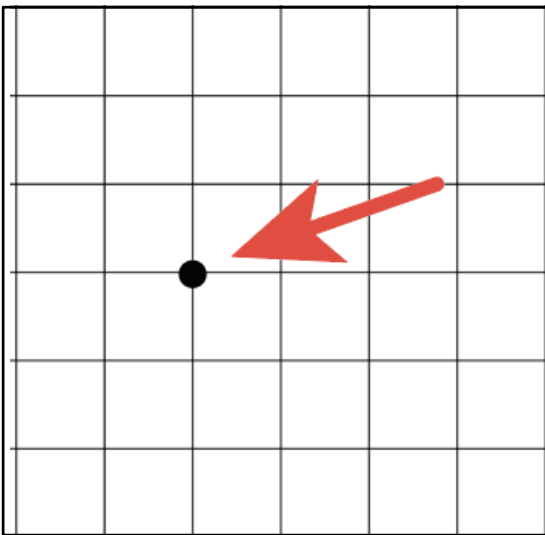Write the total of the digit sums in the middle.

X _____	Digit Sum	Digit Sum Total	Digit Sum	X _____

Complete the Chart:

Drawing Geometric Patterns
based on **Digit Sums**
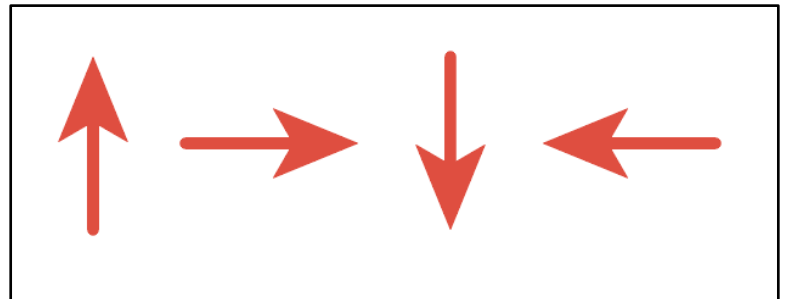
Digit Sums :

    Times 8 :

Write the first ten multiples of number in the title of the page.
Then write the digit sum of each multiple directly above it.

Next, find the starting point on the grid.

Draw a line from the starting point straight up so that it is as tall as the first digit sum.

Continue drawing lines with lengths equal to the digit sums. Make each line head a quarter turn clockwise from the one before.
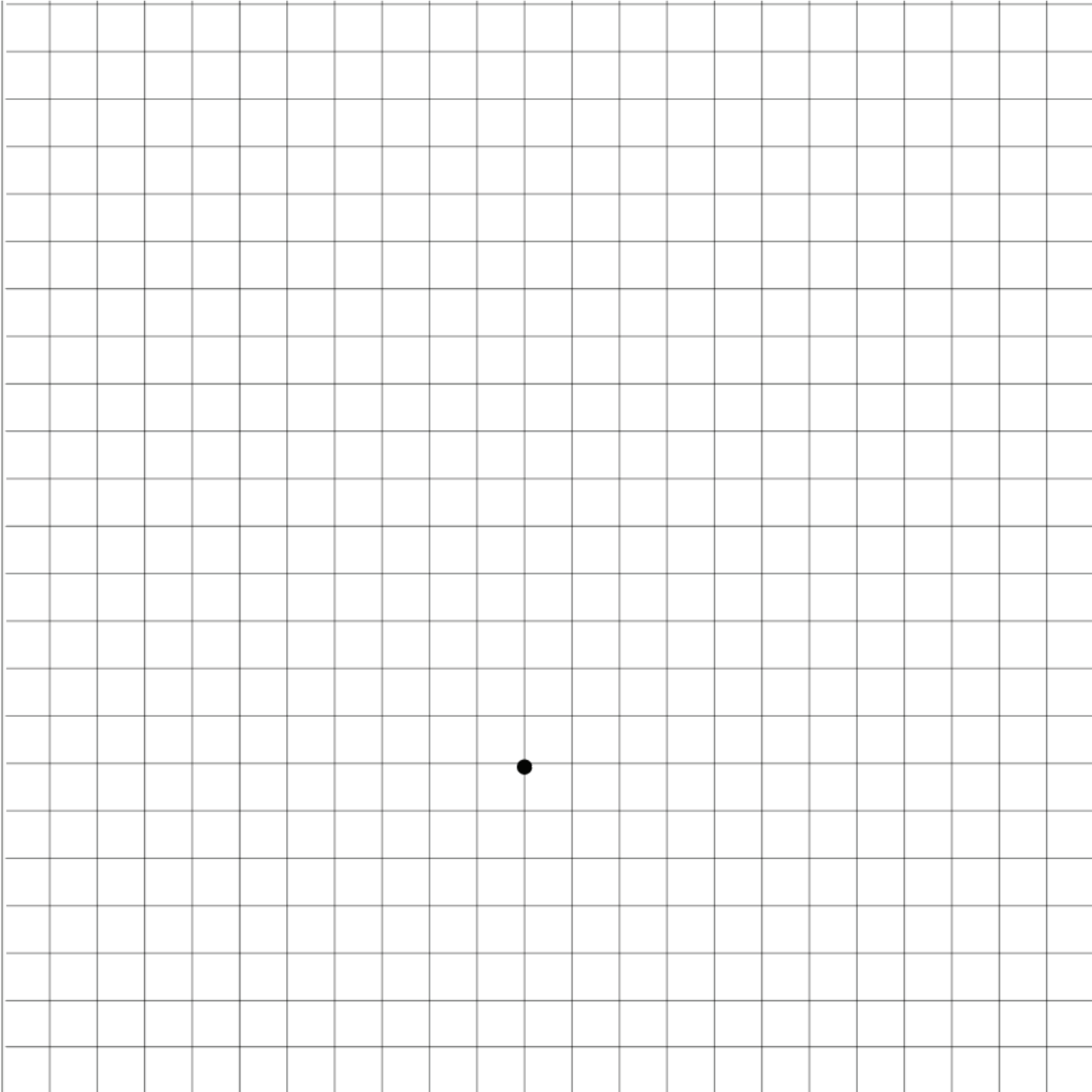
Geometric Patterns
Based on Digit Sums of Multiples of
ONE

name:

Digit Sums :

Times 1 :

Use the digit sums to create a pattern inside the grid. From the starting point draw a line up 1, right 2, down 3, left 4 and up 5. Continue drawing up, right, down, and left repeating the digit sums in order until you return to the starting point. Count mindfully. Draw slowly. Breathe.

Geometric Patterns
Based on Digit Sums of Multiples of
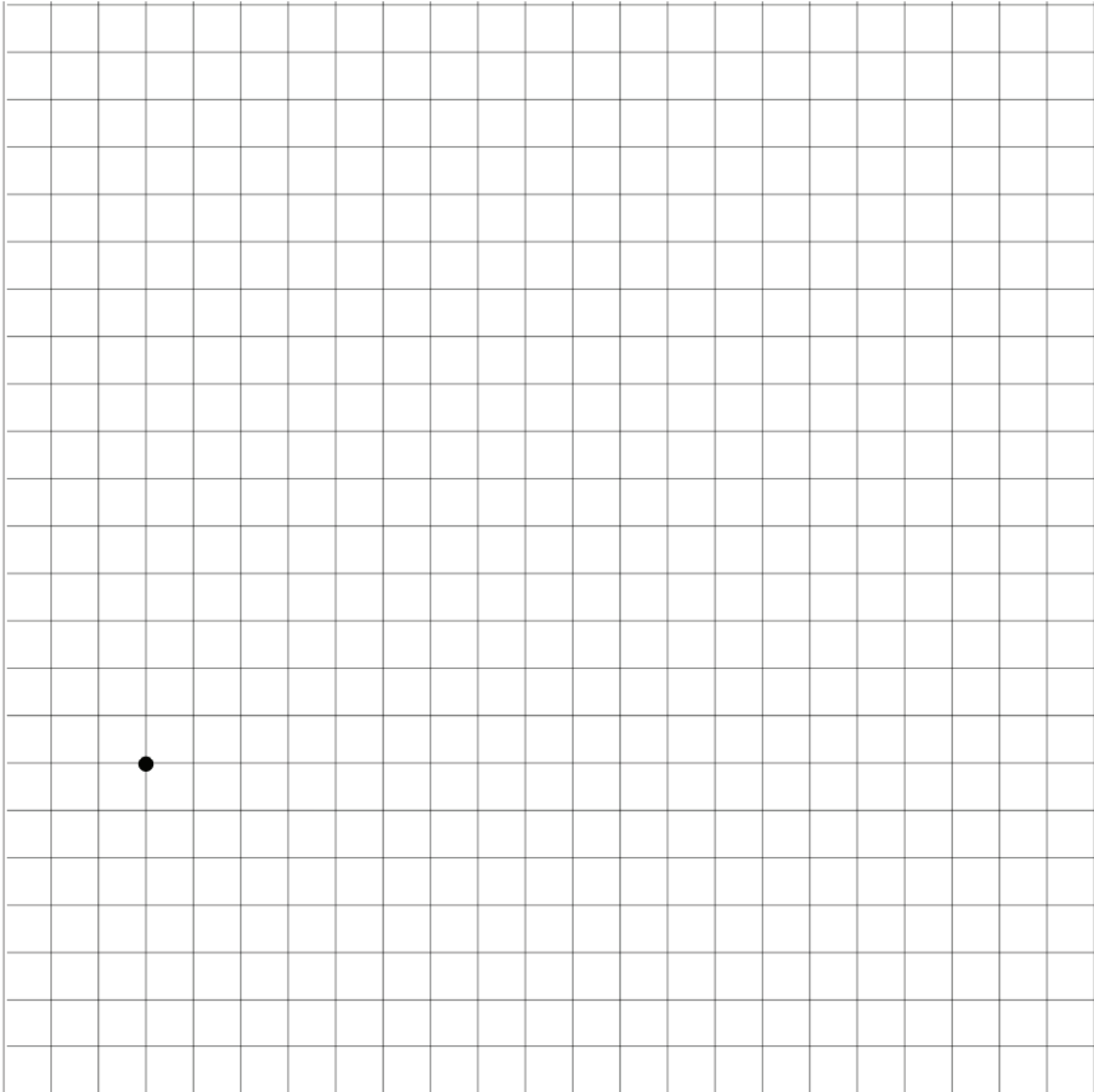# EIGHT

name:

Digit Sums :

Times 8 :

Use the digit sums to create a pattern inside the grid. From the starting point draw a line up 8, right 7, down 6, left 5 and up 4. Continue drawing up, right, down, and left repeating the digit sums in order until you return to the starting point. Count mindfully. Draw slowly. Breathe.

Answer Key

Answer Key

Number		Digit Sum	Number		Digit Sum
5		5	47	4+7=11 1+1=2	2
26	2+6=8	8	77	7+7=14 1+4=5	5
55	5+5=10 1+0=1	1	26	2+6=8	8
52	5+2=7	7	93	9+3=12 1+2=3	3
13	1+3=4	4	31	3+1=4	4
42	4+2=6	6	50	5+0=5	5
81	8+1=9	9	134	1+3+4=8	8

Complete the Chart: Answer Key

x ___1___	Digit Sum	Digit Sum Total	Digit Sum	x ___8___
1	1	9	8	8
2	2	9	7	16
3	3	9	6	24
4	4	9	5	32
5	5	9	4	40
6	6	9	3	48
7	7	9	2	56
8	8	9	1	64
9	9	9	9	72
10	1	9	8	80

Geometric Patterns
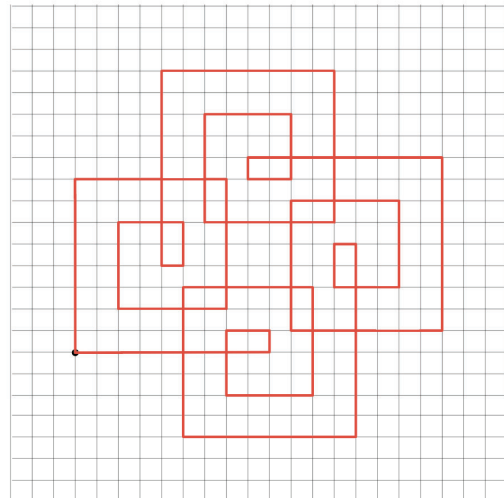Based on Digit Sums of Multiples of
ONE
name:
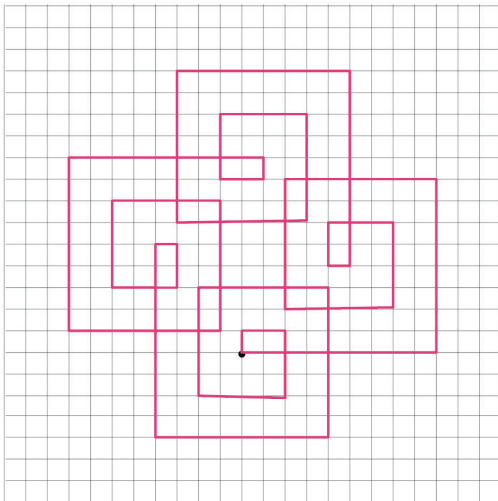
digit sum : 1, 2, 3, 4, 5, 6, 7, 8, 9,

times 1 : 1, 2, 3, 4, 5, 6, 7, 8, 9,

Geometric Patterns
Based on Digit Sums of Multiples of
EIGHT
name:

digit sum : 8, 7, 6, 5, 4, 3, 2, 1, 9

times 8 : 8, 16, 24, 32, 40, 48, 56, 64, 72,

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