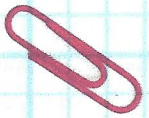
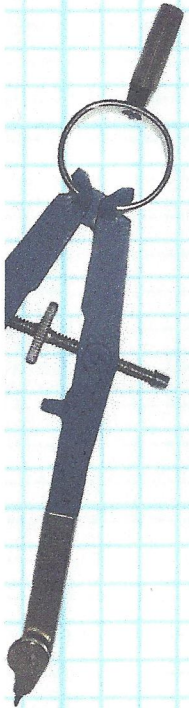
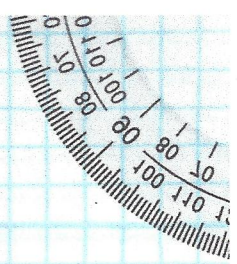
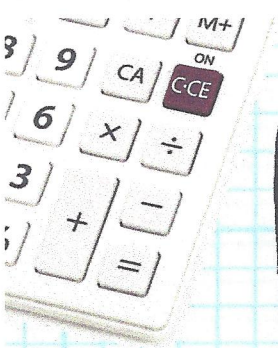
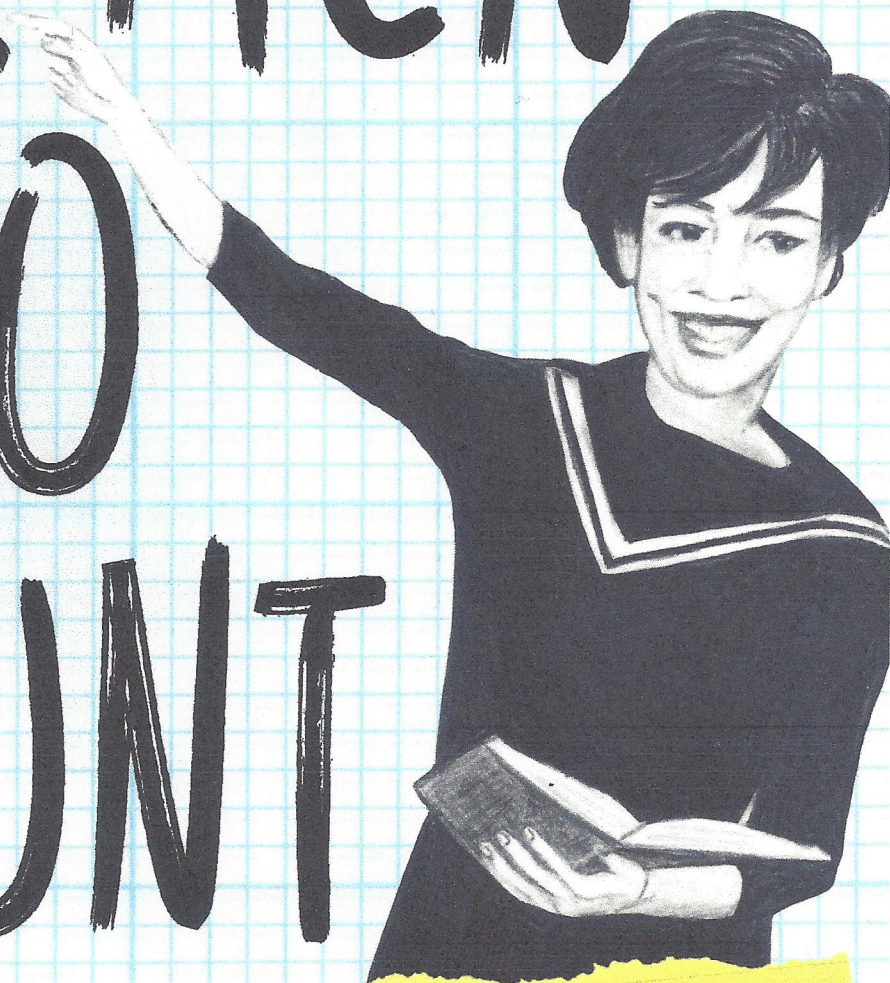


WOMEN

WHO
COUNT



Honoring African American
Women Mathematicians



BY SHELLY M. JONES, PH.D.
ILLUSTRATED BY VERONICA MARTINS

Contents

	Acknowledgments	ix
	Introduction	xi
<i>The Mathematicians</i>	<i>The Activities</i>	
	Chapter 1: The Firsts	1
Dr. Martha Euphemia Lofton Haynes	African American Women Mathematicians	2
	Connect the Coordinate Points	
Dr. Evelyn Boyd Granville	Color the Mercury Friendship 7 Spacecraft	6
	NASA Facts	
Dr. Marjorie Lee Browne	Color by Shape!	10
	Geometry Vocabulary Word Search	
	Chapter 2: The Pioneers	15
Dr. Sylvia Trimble Bozeman	Fun with Magic Squares	16
	Euler Graphs: Paths and Circuits	
Dr. Etta Zuber Falconer	Sisters Chapel Coloring	20
	Magic Squares Challenge	
Dr. Sadie Catherine Gasaway	Color By Number	24
Dr. Gloria F. Gilmer	Color Me Pretty!	26
	What's That Word?	
Dr. Gloria Conyers Hewitt	Teaching Children is What I Love! Coloring Page	30
	Lucky You! Word Search	
Dr. Genevieve Madeline Knight	Dr. Genevieve Knight Maze	34
	Decode the Puzzle	
Dr. Carol E. Malloy	Find the Treasure Chest	38
	Benjamin Banneker Gears	
Dr. Vivienne Lucille Malone-Mayes	Tangram Coloring	42
	Making Tangram Figures	
	Mystery Shape Equations	
Dr. Argelia Velez-Rodriguez	Cuban Street Scene Coloring Page	48
	Fraction Facts: Color the Planets	
	Chapter 3: The Un-Hidden Figures	53
Dr. Christine Mann Darden	Dr. Christine Darden Crossword Puzzle	54
	Tessellation Darden	
	Sudoku Puzzle Fun	
Mary Winston Jackson	Brain Buster	60
	Wind Tunnel Math	
Katherine Coleman Goble Johnson	Katherine Johnson Riddle	64
	Katherine Johnson Word Search	
Dorothy Johnson Vaughan	Color the Fish Tessellation	68
	Decode the Message about Dorothy Vaughan	
	Quadrilateral Transformations	

	Chapter 4: The Contemporary Firsts	73
Dr. Christina Eubanks-Turner	Pattern Block Design	74
Dr. Raegan Higgins	Integer Race	76
Dr. Tasha R. Inniss	Dr. Tasha Inniss's Message	78
Dr. Monica Jackson	Spatial Statistics Map	80
Dr. Talea Mayo	Palindrome Magic!	82
Dr. Yolanda Parker	Lemon Pi(e)	84
Dr. Candice Price	Solve the Shapes Puzzle	86
	Mathematics and More Crossword Puzzle	
Dr. Shree W. Taylor	Dr. Taylor Word Search	90
Dr. Erica N. Walker	Flower Creative Coloring	92
Dr. Chelsea Walton	Function Fun Word Search	94
Dr. Talitha M. Washington	Blast Off! Plot the Points	96
Dr. Kimberly S. Weems	Statistics Words to Know	98
Dr. Shelby Wilson	I Spy	100
	Selected Activity Answer Keys	103
	References	129
	About the Author	133
	About the Illustrator	135
	Photo Credits	137

Dr. Gloria F. Gilmer



What is ethnomathematics? It is a term that Gloria Ford Gilmer knows well. Dr. Gilmer has explained it by saying, “ethnomathematics is the study of such mathematical ideas involved in the cultural practices of a people”.

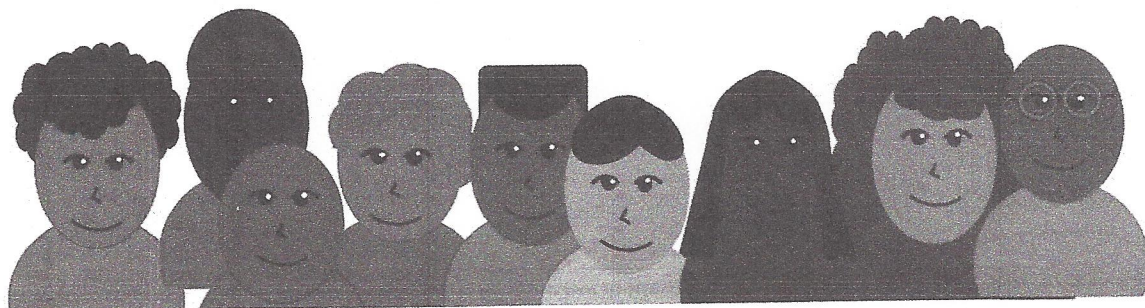
Gloria Ford Gilmer was born in Baltimore, Maryland, in 1928. She earned a bachelor of science degree in mathematics from Morgan State University in 1949 and a master of arts degree in mathematics from the University of Pennsylvania in 1951. She taught in public schools, universities, and six different historically Black colleges. She was in line to be the fourth African American woman to receive her Ph.D. in mathematics, but she took time off to raise a family. She later went back and received a Ph.D. in curriculum and instruction from Marquette University in Milwaukee, Wisconsin. She felt her enjoyment of mathematics outdid any disadvantages she had as a woman.

Dr. Gilmer was a leader in the field of ethnomathematics, the study of how different people in different cultures use mathematics. Even though all cultures use mathematics, they may use it in many different ways. One topic Dr. Gilmer especially enjoyed exploring was the different patterns that hairstylists create when braiding African American women's hair. She linked how these hair patterns (called tessellations) were often similar to the patterns found in nature. She especially enjoyed showing her students that mathematics can be found in many unexpected places.

Dr. Gilmer co-founded the International Study Group on Ethnomathematics (ISGE). She was a member of many mathematics associations and was even chosen to be a research associate for the United States Department of Education. She served as the president for Math Tech, Inc., a corporation that strives to blend educational research into effective ways to encourage women and minorities to explore mathematics.

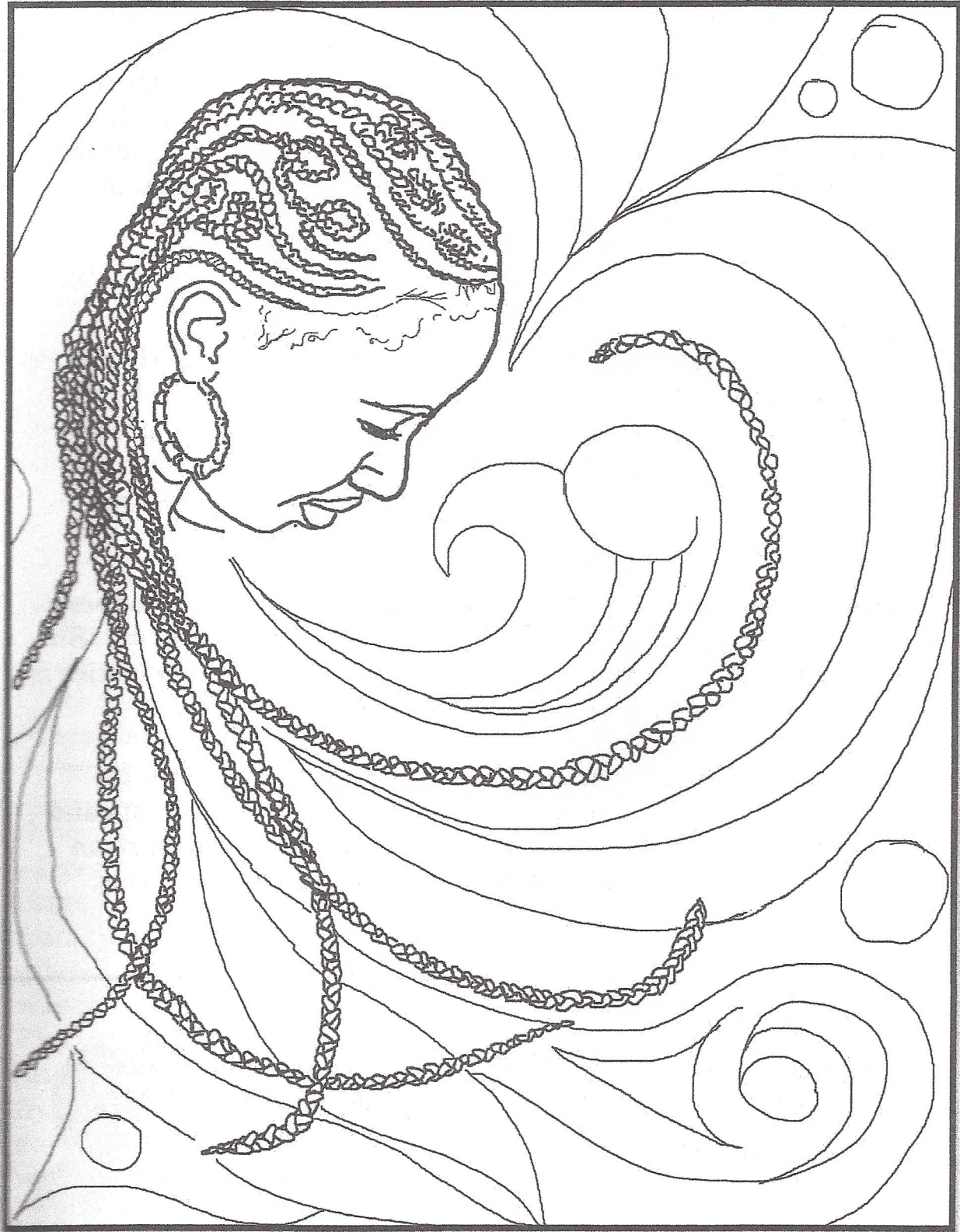
Sometimes students feel that anything they learn in mathematics is useless. Dr. Gilmer worked hard to prove the opposite was true. She liked to encourage everyone to go out and find where mathematics is hidden in our everyday world.

In an interview Dr. Gilmer stated, "educators often overlook the importance of making emotional connections between students and the subject matter". Her article *Mathematical Patterns in African American Hairstyles* is an example of how she incorporates this principle.



Color Me Pretty!

Dr. Gilmer would see lots of math in this beautiful hairstyle.



What's That Word?

Directions: Solve each equation. Write the solution and then the corresponding letter. The letters will spell out the secret math word. Write the word on the line below and then define it.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M

14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Equation	Solution	Solution's corresponding letter
$40 \div (3 + 5)$		
$\frac{60}{3}$		
$2 + 2 \times 3$		
$2 \times (3 + 4)$		
$\left(\frac{15}{3}\right) \times 3$		
$1 + 1 + 2 \times 5 + 1$		
12^0		
$2 \times 2 \times 10 \div 2$		
2^3		
$23^0 \times 10 \div 2$		
$\frac{69}{3} - 10$		
$7 \times 8 \div 56$		
$2 \times 2 \times 5$		
$(18 \div 6)^2$		
$\frac{27}{3^2}$		
$140 \div 7 - (8 - 7)$		

Secret word and definition: _____