

# MathFLIX CHALLENGE

Creating Tables to Solve Problems Inspired by The Librarian of Basra: A True Story from Iraq  
by Jeanette Winter

Alia Muhammad Baker, the chief librarian of Basra's Central Library, refused to let a war destroy the library books. She and her friends moved most of the books to a nearby restaurant just nine days before the library was destroyed. Complete the table below and you will understand the magnitude of her heroic deed.\*

# of children's books	weight of books (lbs)	# of backpacks (20 lbs)	# of days (10 trips/day)	# of boxes 1x1x1.3 cu. ft.
1				
10	5			
100		2.5		1
1,000				
10,000				
30,000				

\* The average library book is 5 times larger than a children's book. Multiply the totals in the table above to understand the enormity of Alia Muhammad Baker's effort.

A generous alumnus of your school has decided to donate a new basketball for each student in your class. Each basketball is packaged in a box that measures 10"x10"x10". If your teacher volunteered to store the basketballs in your classroom, would they fit?

Follow the steps below used to complete the data for the sample school - then complete the calculations for your school. Remember: Volume = height x length x width.

**Step#1.** Calculate the volume needed for one basketball. Multiply that number by the number of students.

**Step#2.** Calculate the volume of the sample classroom in cubic feet and cubic inches.

**Step#3.** Compare the volume of the total basketball packages with the volume of the classroom to see which is larger.

**Sample Classroom**

Room Measurements	Measurement in Feet	Measurement in Inches
height	10	120
length	30	360
width	20	240

Volume of sample classroom = 6,000 cu. ft.  
Volume of sample classroom = 10,368,000 cu. in.  
6,000 cu. ft. = 10,368,000 cu. in.

There are 50 students in the sample class so 50,000 cu. in. are needed for their basketballs which will fit easily into the sample classroom.

**YOUR Classroom**

Room Measurements	Measurement in Feet	Measurement in Inches
height		
length		
width		

Volume of YOUR classroom = \_\_\_\_\_ cu. ft.  
Volume of YOUR classroom = \_\_\_\_\_ cu. in.  
# of students in your class \_\_\_\_\_ x 1000 cu. in.

Will the basketballs fit in your classroom?