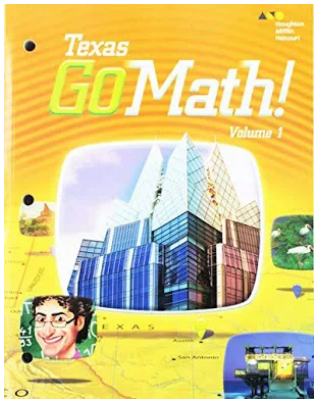
Name: _____ Date: _____

Student directions: *Students will each work with a partner. You and your partner will need to figure out a solution to the following problem: I will give you three different-sized milkcrates per table group. There are eight students in each table group. You will need to figure out the most efficient way to store your table group's math textbooks. The goal is to take up the least amount of space possible in our classroom. Follow the handout I provide for you to help guide your thinking. Use your reference sheet to refer to your formulas!*

1. Textbook dimensions:



Lenght:_____in.

Width:_____in.

Height: _____in.

2. To find the milkcrate(s) that will work best, remember you need to fit all eight of your table groups' books.

Formula for perimeter: _____

Perimeter of book: _____in. Perimeter x 8: _____in.

Formula for area: _____

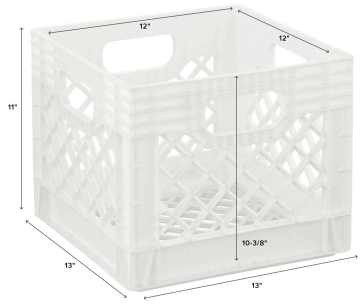
Area of book:_____$in.^2$ Area x 8: _____$in.^2$

Formula for volume: _____

Volume of book:_____$in.^3$ Volume x 8: _____$in.^3$

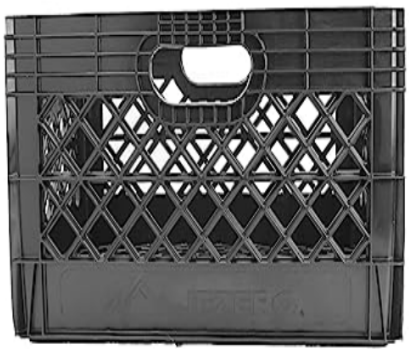
Option 1: medium crate

Dimensions: L = 12” W = 13” H = 11”



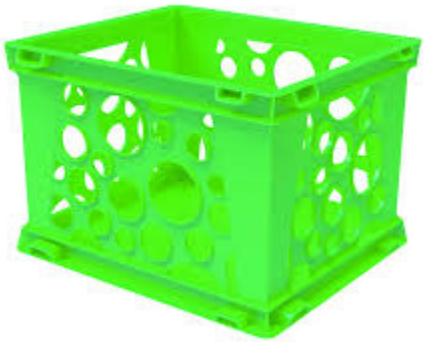
Option 2: large crate

Dimensions: L = 18” W = 12” H = 10”



Option 3: small crate

Dimensions: L = 9” W = 7” H = 6”



What did your group decide would be the best size(s) crates to store your table groups' math textbook? Explain how you got your answer.