STUDENT MATERIALS

A family is moving to a new house. They packed up their belongings and filled a bunch of boxes. Now, they need to figure out which size truck to rent.

Task 1

The truck company sent you the following specifications of each truck. You need to start by finding the overall volume of each truck. Using the measurements they provided in the chart, find the volume that each truck can hold.

Type of Truck	Measurements	Capacity in Cubic Feet
12' Moving Truck	12' x 6.5' x 6.08'	474.24^3
15' Moving Truck	15' x 7.6' x 7.2'	820.8^3
20' Moving Truck	19.5' x 7.6' x 7.2'	1067.04^3
22' Moving Truck	21.9' x 7.6' x 7.2'	1198.368^3

Task 2

Before you can find the overall volume of your boxes you will need to find the volume of each size (small, medium, large, extra-large). Don't forget the quantity of each box used. Be sure to show your work and how you calculated the overall volume.

Box Dimensions

Box Size	Number of Individual Boxes	Dimensions	Capacity in Cubic Feet Per Box	Total Cubic Feet Per Box Type
Small	110	1.3' x 1' x 1'	1.3^3	143^3
Medium	80	1.5' x 1.3' x1.5'	2.925^3	234^3
Large	36	1.5 x 1.5' x 2'	4.5^3	162^3
Extra Large	70	2' x 1.6' x 2'	6.4^3	448^3

Task 3

Which moving truck would you choose? Explain your rationale and be sure to use data to justify your answer. I would choose the 20 moving truck because if you add everything up from the boxes you would get 987 which is less than the trucks vallume and I think if you get the 22 truck it would cost more money but you don't need the unwanted space/you dont want to pay for it.

Task 4

At the last minute, the family decided to bring their 10'x8'x5' outdoor storage container with them. Would this fit in the truck that you selected? Explain and show your work.

987 + 400 = 1387 no this container will not fit in the truck; actual because 1387 is a bigger volume then 1067.04.