

Fish Are Fun

6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

TASK:

Raul works at Fish Are Fun as a sales clerk. His favorite customer, Allen, comes in with a special request. He would like for Raul to design his new aquarium. Raul knows that for every inch of fish you need 1 gallon of water. 1 gallon of water is equal to 231 cubic inches. Below you will find the different fish available at the store as well as their average adult size. Allen has a few requirements for his custom fish tank:

- The tank cannot exceed 50 gallons
- The tank should be a rectangular prism
- The volume of the tank has to be big enough for the fish at adult size, but should not be more than 100in³ over the necessary amount.

The Task

Your Goals:

1. Choose the fish and design the tank to accommodate them.
2. Provide the dimensions of the tank
3. Determine the volume of the tank
4. Justify why your tank is the best for Allan and his fish.

Fish Choices



<http://en.wikipedia.org/wiki/Rainbowfish>

Rainbow Fish

Avg. Adult Length: 5 in.

<http://en.wikipedia.org/wiki/Zebrafish>

Zebra Danio

Avg. Adult Length: 2 in.

http://en.wikipedia.org/wiki/Panda_corydoras

Cory Catfish

Avg. Adult Length: 4 in.