

Focus  
Standards  
and Claim

Claim 4  
5.MD.C.5

Stimulus

### Picking a Pet

Your class is trying to decide what type of animal to get for the class pet. Your teacher is letting the class vote to choose a goldfish, a turtle, or a hamster as the class pet.

All 20 students in your class voted for both their 1st choice and their 2nd choice for the class pet. The results are shown in Table 1.

**Table 1. Class Pet Votes**

Student	1st Choice	2nd Choice	Student	1st Choice	2nd Choice
1	Turtle	Hamster	11	Turtle	Hamster
2	Goldfish	Hamster	12	Turtle	Goldfish
3	Goldfish	Turtle	13	Hamster	Turtle
4	Hamster	Turtle	14	Hamster	Goldfish
5	Goldfish	Turtle	15	Turtle	Goldfish
6	Turtle	Goldfish	16	Goldfish	Turtle
7	Hamster	Goldfish	17	Turtle	Goldfish
8	Turtle	Goldfish	18	Turtle	Goldfish
9	Goldfish	Hamster	19	Turtle	Hamster
10	Goldfish	Hamster	20	Goldfish	Hamster

## Item Prompt

Your principal surprises you by buying your class a turtle. He brings the turtle to your class along with a sheet from the pet store titled "Turtle Tank Rules".

The rules state:

- Tank walls must be at least 1 foot tall so the turtle can't climb out.
- There must be at least 400 square inches of floor space for the turtle to walk around on.

Your teacher says the volume of the tank must be smaller than 5000 cubic inches so it doesn't take up too much room in the classroom.

Give the dimensions of a tank that would work for your new turtle. Use words and numbers to explain how your tank satisfies the "Turtle Tank Rules" and your teacher's requirement.

**Volume of a rectangular prism = length x width x height**

## Sample Responses

## Sample Response A

The dimensions that I used work because it is one foot tall, there is 416 space for the turtle to walk, and it is less than 5000 inches so it doesn't take up too much space.

Length = 26 in long

Width = 16 in

Height = 12 in tall

## Sample Response B

$$2 \times 700 \times 3 = 4,200$$

## Sample Response C

Since the floor has to be at least 400 sqi I decided the width 40 and length 10. Which equals 400. Then I multiplied 400 by 12 and got 1800 square inches. Since 12in is equal to 1 ft the tank is big enough for the turtle and it can't climb out. Also it is not too big for the classroom since 4800 in is under 5000 inches.

Sample Response D	Length = 50 inches Width = 8 inches Height = 12 inches
Sample Response E	length: 400 width: 1 ft height: 1 ft  1 foot = 12 inches  $400 \times 1 = 400$ $400 \times 12 = 4800$  4800 inch squared
Sample Response F	The dimensions of a functional tank for the turtle could be 8in. by 50in. by 12in. This tank is functional because it follows the teachers "Turtle Tank Rules."  Length = 50 in Width = 1 ft or 12 in Height = 8 in
Sample Response G	$12 \times 100 = 1200 \times 4 = 4800$ The dimensions are One hundred four and twelve because One hundred times four is four hundred and four hundred times twelve is 4800  $l = 100\text{in}$ $w = 4\text{in}$ $H = 12\text{in}$
Sample Response H	Length = 500 Width = 10 Height = 1 foot