Alright, let's solve this problem together step by step! First, let's understand what density means. Density is a measure of how tightly packed the particles are in a material. It tells us how much a substance weighs in a given volume. In this case, the brick has a density of 2.25 grams per cubic centimeter.

Now, we are given that the volume of the brick is 368 cubic centimeters. Volume is the amount of space an object occupies. Think of it like the size of the brick.

To calculate the mass of the brick, we can use the formula: Mass = Density x Volume. So, in this case, we would multiply the density of the brick (2.25 g/cm^3) by the volume of the brick (368 cm^3).

When we do the calculation, Mass = 2.25 g/cm^3 x 368 cm^3 = 828 grams. Therefore, the mass of the brick is 828 grams.

So, in simple terms, the mass of the brick (how heavy it is) is 828 grams because it is made of material that weighs 2.25 grams for every cubic centimeter it occupies, and since it occupies 368 cubic centimeters, we multiply the two to get the final mass.