

## Answer on Question#65087 - Chemistry - General Chemistry

Question: How many grains of rice will it take to cover the state of Florida 1 meter deep? You must use dimensional analysis to do all calculations.

---I must also utilize moles in my answer somehow.

### **Solution:**

Florida area is  $170304 \text{ km}^2$  or it is  $170304 \cdot 10^6 \text{ m}^2$ .

Then the volume of area you want to plant rice will be:

$$170304 \cdot 10^6 \cdot 1 = 170304 \cdot 10^6 \text{ m}^3.$$

And in liters is equal to:

$$170304 \cdot 10^9 \text{ L}$$

$$n = V/V_m = 170304 \cdot 10^9 / 22.4 = 7.6 \cdot 10^{12} \text{ mol}$$

**Answer:**  $7.6 \cdot 10^{12} \text{ mol}$

Answer provided by <https://www.AssignmentExpert.com>