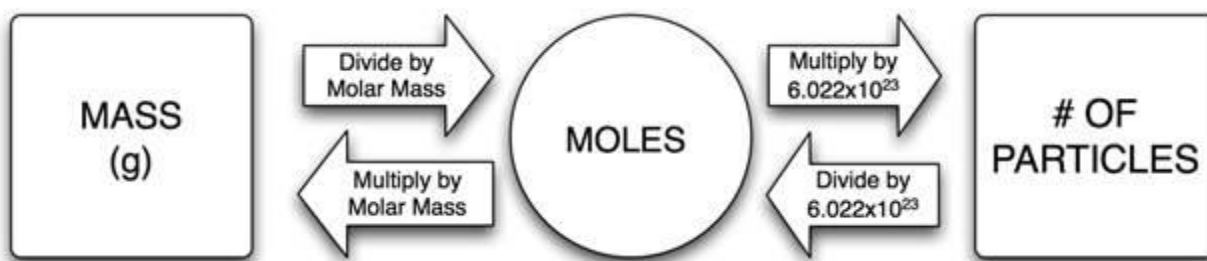


Name _____ KEY _____ Period _____



- 1) A candy bar has a mass of 300 grams, the packaging weighs 15 grams. How many moles of sucrose are in the candy bar ($C_{12}H_{24}O_{12}$)? How many moles of Oxygen? How many Moles of Carbon? How many Moles of Hydrogen?

Molar mass of sucrose = 360g/mol
Mass of candy 300 – 15 = 285g sucrose (assuming all candy is pure sugar)
Moles of sucrose 285g X 1mol/360g = .79 moles of sucrose
Moles of Oxygen .79mol sucrose X 12 = 9.48 mol of O
Moles of Carbon .79 mol sucrose X 12 = 9.48 mol of C
Moles of Hydrogen .79 mol sucrose X 24 = 18.96 mol of H

- 2) There is a jar of pennies, and a scale. How can you count the number of pennies without counting them all one by one? The weight of the jar empty is known.

1) Count out a number of pennies, like 10.
2) Weigh the 10 pennies
3) Divide the weight of the 10 pennies by 10. (this is the average weight of one penny)
4) Weight the jar full of the pennies.
5) Subtract the weight of the glass jar from the weight of the jar full of pennies. (this is the weight of all the pennies)
6) Divide the weight of all the pennies by the weight of one penny. (this is the number of pennies in the jar!!)