


## Mole Map - Using a Mole Map

### Question One:


How many molecules is 88 grams of CO<sub>2</sub>?

Molar Masses 

CO<sub>2</sub>: 44.009 g/mol

### Question Two:

How many grams is  $3.01 \times 10^{23}$  molecules of dinitrogen pentoxide, N<sub>2</sub>O<sub>5</sub>?

Molar Masses 

N<sub>2</sub>O<sub>5</sub>: 108.009 g/mol

### Question Three

How many formula units is 8.6 grams of zinc chloride,  $\text{ZnCl}_2$ ?

Molar Masses



$\text{ZnCl}_2$  136.286 g/mol

## Using a Mole Map for More Difficult Conversions

### Question Four

How many chloride ions are present in 0.5 moles of  $\text{CaCl}_2$ ?

Molar Masses



Ca 40.1g/mol

Cl 35.45 g/mol

$\text{CaCl}_2$  110.98 g/mol

### Question Five

How many chloride ions are present in 8.6 grams of  $\text{ZnCl}_2$ ?

Molar Masses



Zn 65.38 g/mol

Cl 35.453 g/mol

$\text{ZnCl}_2$  136.286 g/mol

### Question Six

In a sample of sucrose  $C_{12}H_{22}O_{11}$  there were  $8.56 \times 10^{24}$  atoms of oxygen, how many grams of sucrose were in the sample?

Molar Masses	
C	12.011 g/mol
H	1.008 g/mol
O	15.999 g/mol
$C_{12}H_{22}O_{11}$	342.297 g/mol

### Question Seven

5.0 g sucrose  $C_{12}H_{22}O_{11}$  contains how many atoms of Hydrogen?

Molar Masses	
C	12.011 g/mol
H	1.008 g/mol
O	15.999 g/mol
$C_{12}H_{22}O_{11}$	342.297 g/mol