Warm Up

Determine the mass of 0.414 mol of chlorine.

$$0.414 \, mol \, Cl_2 \times \frac{70.90 \, g \, Cl_2}{1 \, mol \, Cl_2} = \boxed{29.4 \, g \, Cl_2}$$

$$Cl_2 \rightarrow (2 \times 35.45) = 70.90 \, g/mol$$

How many moles are found in 34.8L of C_4H_{10} at STP?

$$34.8 \, L \, C_4H_{10} \times \frac{1 \, mol \, C_4H_{10}}{22.4 \, L \, C_4H_{10}} = \boxed{1.55 \, mol \, C_4H_{10}}$$

$$5.40 \times 10^{21} \text{ atoms } Ca$$

Exp

EE

$\boxed{10^x}$

$$8.97 \times 10^{-3} \text{ mol}$$

$$0.00897 \text{ mol}$$

$$8.97 \times 10^{-3}$$

$$8970$$

Molar calculations worksheet

1. 8.97×10^3 mol

2. 1.49×10^{25} atoms

3. 1.30×10^{26} atoms

4. 46.01 g/mol

5. 14 300 mol

6. 342.34 g/mol

7. 159.70 g/mol

8. 4.24×10^{24} molecules

9. 1.79×10^{25} atoms

10. 643 g

11. 0.266 mol

12. 10 900 g

13. 6.26 mol

Check Homework   #24-28, 31

NO_2

V=22.4 L

n = 1 mol

6.02×10²³ molecules

46.01 g

31

CO

V=22.4 L

n = 1 mol

6.02×10²³ molecules

28.01 g

CO_2

V=22.4 L

n = 1 mol

6.02×10²³ molecules

44.01 g
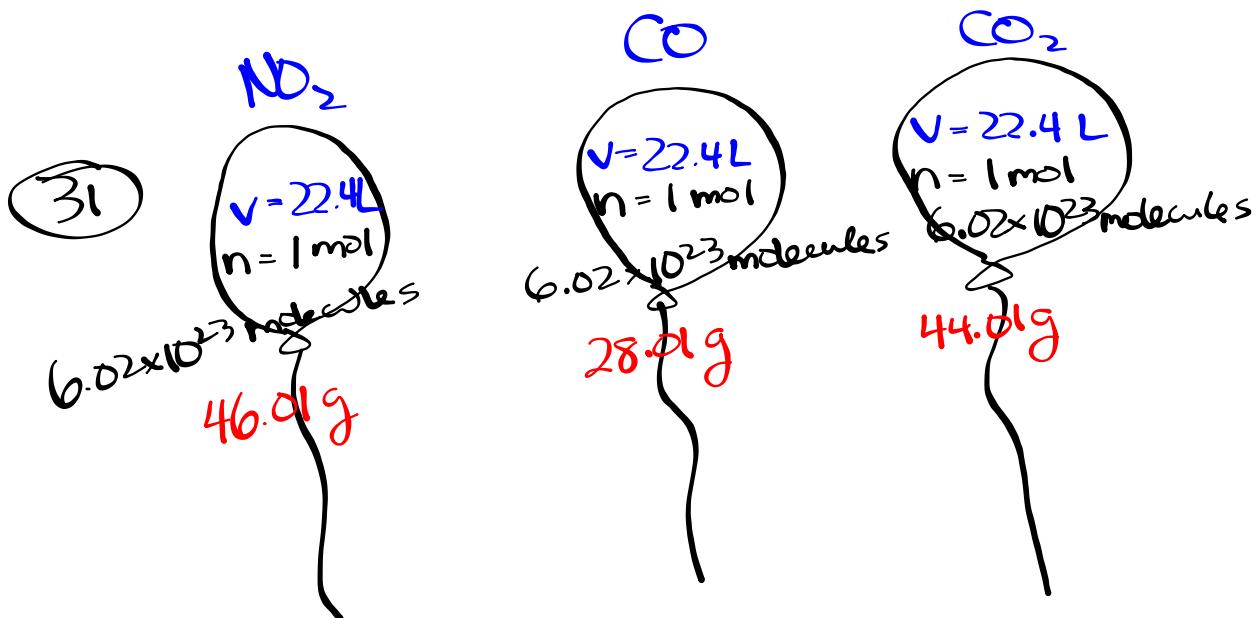
Worksheet - Molar Calculations