

Name \_\_\_\_\_

Mole Calculations Worksheet

You must show your work for credit

1. How many moles of Na are in 42 g of Na?
2. How many moles of O are in 8.25 g of O?
3. How much does 2.18 mol of Cu weigh?
4. What is the mass of 0.28 mol of iron?
5. How many atoms are in 7.2 mol of chlorine?
6. How many atoms are in 36 g of bromine?
7. How many moles are in  $1.0 \times 10^9$  atoms?
8. What is the mass of  $1.20 \times 10^{25}$  atoms of sulfur?
9. How many moles of CO molecules are in 52 g of CO?
10. How many moles of  $C_2H_6$  are in 124 g?
11. How many moles of  $CCl_4$  are there in 56 g?
12. How much does 2.50 mol of  $H_2SO_4$  weigh?
13. How much does 0.25 mol of  $Fe_2O_3$  weigh?
14. How many molecules are there in 52 g of CO?
15. How many formula units are in 22.4 g  $SnO_2$ ?
16. How many molecules are in 116 g  $CCl_4$ ?
17. What is the mass of  $3.01 \times 10^{23}$  formula units of  $Fe_2O_3$ ?
18. What is the mass of  $1.2 \times 10^{25}$  molecules of CO?

### Answers

1. 1.8 mol Na
2. 0.516 mol O
3. 139 g Cu
4. 16 g Fe
5.  $4.3 \times 10^{24}$  Cl atoms
6.  $2.7 \times 10^{23}$  Br atoms
7.  $1.7 \times 10^{-15}$  mol
8. 639 g S
9. 1.9 mol
10. 4.12 mol
11. 0.36 mol
12. 245 g
13. 40. g
14.  $1.1 \times 10^{24}$  molecules
15.  $8.95 \times 10^{22}$  formula units
16.  $4.54 \times 10^{23}$  molecules
17. 79.9 g  $\text{Fe}_2\text{O}_3$
18.  $5.6 \times 10^2$  g CO