

Moles & Particles

Name _____ Period _____ Date _____

Sample Problems ...

(1) 1.25 moles Al = _____ atoms of Al

(2) 4.38×10^{20} atoms of carbon = _____ moles C

Solve the following problems ... show all work!

1. 2.540 moles of Fe = _____ atoms of iron

2. 7.512×10^{-5} moles H_2O = _____ molecules of water

3. 3.251×10^{25} molecules ammonia = _____ moles ammonia

4. 7.125×10^{16} atoms of barium = _____ moles Ba

5. 0.1125 moles glucose = _____ glucose molecules

6. 3.612×10^{23} atoms Ni = _____ moles of Ni

Name _____ KEY _____ Period _____ Date _____

Standards:

- 3.1.10 D Apply scale as a way of relating concepts and ideas to one another by some measure.
- 3.4.10 A Explain concepts about the structure and properties of matter.

Sample Problems ...

(1) 1.25 moles Al = 7.53×10^{23} atoms of Al

(2) 4.38×10^{20} atoms of carbon = 0.000727 moles C

Solve the following problems ... show all work!

1. 2.540 moles of Fe = $\underline{1.529 \times 10^{24}}$ atoms of iron

2. 7.512×10^{-5} moles H_2O = $\underline{4.522 \times 10^{19}}$ molecules of water

3. 3.251×10^{25} molecules ammonia = $\underline{54.00}$ moles ammonia

4. 7.125×10^{16} atoms of barium = $\underline{1.184 \times 10^{-7}}$ moles Ba

5. 0.1125 moles glucose = $\underline{6.775 \times 10^{22}}$ glucose molecules

6. 3.612×10^{23} atoms Ni = $\underline{0.5998}$ moles of Ni