

This is a draft of a quiz on ChemReview Modules 5 and 6.

This quiz depends on all students NOT having access to a periodic table which identifies metals, metalloids, and non-metals. If that is not practical, delete or change Q 6 and 7.

In the 3 quiz versions below, some questions and answers are the same, but the order of the answers is scrambled. In other questions, the numbers have been varied but should be similar in difficulty.

I carefully hand out 2 different copies of every quiz, and save one as a makeup, which I grade a bit harder: like, if I drop a Q from the regular quiz in the interest of time, on the makeup, I forget to do that.... Makeups, if required, are a pain that should be shared.

The quiz is intended to be given on the day the assignment from the mods is due.

It is intended to be easy IF they have done the assignment.

For a quiz that takes less time, or if you want to quiz on a smaller assignment than these 2 mods, it should be easy to delete some questions.

Answer keys I get (please check) are

	1	2	3	4	5	6	7
Version with 1e = <b>48 L:</b>	C	B	E	D	D	C	D
Version with 1e = <b>0.016 L:</b>	A	D	C	B	B	A	B
Version with 1e = <b>4.5 L:</b>	E	E	B	C	E	B	C

**QUIZ**  
**Mods 5 and 6**

Name: \_\_\_\_\_

Section: \_\_\_\_\_

**Print the LETTER  
of the answer below.**

You *may* use a calculator and a periodic table on this quiz. You may write on this paper and on scratch paper. On the calculations, do the math, *then* pick an answer.

1. If N<sub>2</sub> gas has a molar mass of 28 grams/mole, and one mole of the gas has a volume of 22.4 liters at STP, what would be the volume of 112 grams of N<sub>2</sub> gas at STP (in liters)?  
a. 4.0 L    b. 0.044 L    c. 90. L    d. 0.18 L    e. 48 L  
1. \_\_\_\_\_
2. If the distance from the Mars to the sun is 128 x 10<sup>6</sup> miles, and light travels at 3.0 x 10<sup>8</sup> meters/second, how many minutes does it take for light from the sun to reach Mars? (1.61 km = 1 mile)  
a. 1.1 min    b. 11 min.    c. 16 min.    d. 3.2 min.    e. 32 min.  
2. \_\_\_\_\_
3. 32.8 cubic centimeters is how many cubic inches? (1 inch = 2.54 cm)  
a. 12.8 in<sup>3</sup>    b. 5.25 in<sup>3</sup>    c. 535 in<sup>3</sup>    d. 212 in<sup>3</sup>    e. 2.00 in<sup>3</sup>  
3. \_\_\_\_\_
4. A Zn<sup>2+</sup> ion would contain (protons = p<sup>+</sup>, electrons = e<sup>-</sup>)  
a. 28 p<sup>+</sup> and 38 e<sup>-</sup>    b. 32 p<sup>+</sup> and 30 e<sup>-</sup>    c. 30 p<sup>+</sup> and 32 e<sup>-</sup>    d. 30 p<sup>+</sup> and 28 e<sup>-</sup>  
4. \_\_\_\_\_
5. A nuclide with 36 protons and 38 neutrons would have what symbol?  
a. <sup>74</sup>Sr    b. <sup>36</sup>Kr    c. <sup>36</sup>Sr    d. <sup>74</sup>Kr    e. <sup>38</sup>Sr  
5. \_\_\_\_\_
6. Which of these elements is a metalloid?    a. Na    b. K    c. Si    d. C    e. Hg  
6. \_\_\_\_\_
7. Which of these elements is a *non*-metal?    a. Na    b. K    c. Si    d. C    e. Hg  
7. \_\_\_\_\_

**QUIZ**  
**Mods 5 and 6**

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of the answer below.**

You *may* use a calculator and a periodic table on this quiz. You may write on this paper and on scratch paper. On the calculations, do the math, *then* pick an answer.

1. If F<sub>2</sub> gas has a molar mass of 38.0 grams/mole, and one mole of the gas has a volume of 22.4 liters at STP, what would be the volume of 57 grams of F<sub>2</sub> gas at STP (in liters)?  
a. 34 L    b. 0.067 L    c. 18 L    d. 1.5 L    e. 0.016 L  
1. \_\_\_\_\_
2. If the distance from the Venus to the sun is 67 x 10<sup>6</sup> miles, and light travels at 3.0 x 10<sup>8</sup> meters/second, how many minutes does it take for light from the sun to reach Venus? (1.61 km = 1 mile)  
a. 1.1 min    b. 11 min.    c. 32 min.    d. 6.0 min.    e. 0.60 min  
2. \_\_\_\_\_
3. 65.6 cubic centimeters is how many cubic inches? (1 inch = 2.54 cm)  
a. 25.6 in<sup>3</sup>    b. 10.5 in<sup>3</sup>    c. 4.00 in<sup>3</sup>    d. 1,070 in<sup>3</sup>    e. 423 in<sup>3</sup>  
3. \_\_\_\_\_
4. A Co<sup>2+</sup> ion would contain (protons = p<sup>+</sup>, electrons = e<sup>-</sup>)  
a. 27 p<sup>+</sup> and 29 e<sup>-</sup>    b. 27 p<sup>+</sup> and 25 e<sup>-</sup>    c. 25 p<sup>+</sup> and 27 e<sup>-</sup>    d. 29 p<sup>+</sup> and 27 e<sup>-</sup>  
4. \_\_\_\_\_
5. A nuclide with 36 protons and 38 neutrons would have what symbol?  
a. <sup>36</sup>Sr    b. <sup>74</sup>Kr    c. <sup>38</sup>Sr    d. <sup>74</sup>Sr    e. <sup>36</sup>Kr  
5. \_\_\_\_\_
6. Which of these elements is a metalloid?    a. Si    b. C    c. Hg    d. Na    e. K  
6. \_\_\_\_\_
7. Which of these elements is a *non-metal*?    a. Si    b. C    c. Hg    d. Na    e. K  
7. \_\_\_\_\_

**QUIZ**  
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of the answer below.**

You *may* use a calculator and a periodic table on this quiz. You may write on this paper and on scratch paper. On the calculations, do the math, *then* pick an answer.

1. If N<sub>2</sub> gas has a molar mass of 28.0 grams/mole, and one mole of the gas has a volume of 22.4 liters at STP, what would be the volume of 5.6 grams of N<sub>2</sub> gas at STP (in liters)?  
a. 0.0089 L    b. 2.4 L    c. 0.20 L    d. 0.022 L    e. 4.5 L  
1. \_\_\_\_\_
2. If the distance from the Mars to the sun is 128 x 10<sup>6</sup> miles, and light travels at 3.0 x 10<sup>8</sup> meters/second, how many minutes does it take for light from the sun to reach Mars? (1.61 km = 1 mile)  
a. 16 min.    b. 3.2 min.    c. 32 min.    d. 1.1 min    e. 11 min.  
2. \_\_\_\_\_
3. 81.9 cubic centimeters is how many cubic inches? (1 inch = 2.54 cm)  
a. 32.0 in<sup>3</sup>    b. 5.00 in<sup>3</sup>    c. 13.1 in<sup>3</sup>    d. 1,340 in<sup>3</sup>    e. 540. in<sup>3</sup>  
3. \_\_\_\_\_
4. An Ni<sup>2+</sup> ion would contain (protons = p<sup>+</sup>, electrons = e<sup>-</sup>)  
a. 30 p<sup>+</sup> and 28 e<sup>-</sup>    b. 26 p<sup>+</sup> and 28 e<sup>-</sup>    c. 28 p<sup>+</sup> and 26 e<sup>-</sup>    d. 28 p<sup>+</sup> and 30 e<sup>-</sup>  
4. \_\_\_\_\_
5. A nuclide with 38 protons and 36 neutrons would have what symbol?  
a. <sup>36</sup>Sr    b. <sup>74</sup>Kr    c. <sup>38</sup>Sr    d. <sup>36</sup>Kr    e. <sup>74</sup>Sr  
5. \_\_\_\_\_
6. Which of these elements is a metalloid?    a. K    b. Si    c. C    d. Hg    e. Na  
6. \_\_\_\_\_
7. Which of these elements is a *non*-metal?    a. K    b. Si    c. C    d. Hg    e. Na  
7. \_\_\_\_\_