

Chemistry 050 Information Sheet

1. Effective Fall of 1992, Chemistry 050 is a **prerequisite** for Chemistry 111.
 2. There is no prerequisite for Chemistry 101.
 3. If you are planning to take Chemistry 111 but don't want to take Chemistry 050 then:
 - a. You must receive a passing score on the chemistry placement exam, OR
 - b. Grade of A or B in a high school chemistry **and** minimum 560 math SAT or minimum 25 math ACT score, OR
 - c. Grade of A or B in high school chemistry **and** completion of Math 143, Math 160, or Math 170 with a C or better, OR
 - d. Grade of A or B in high school chemistry **and** a score of 49 or above on the COMPASS College Algebra exam.
 4. A sample of the types of questions on the chemistry fundamentals placement exam appears below. The chemistry fundamentals placement exam is designed to test your knowledge of basic chemistry. Topics covered on the exam are: **significant figures, the metric system, dimensional analysis (unit conversion), density, nomenclature of simple inorganic compounds and common acids, percent mass calculations, scientific notation, balancing equations, molar mass (molecular weight), the mole, stoichiometry, molarity, dilutions, basic algebra, and graphing.** You should have had most of these topics in your high school chemistry course.
- ❖ Students wanting to enroll in Chem 111 prior to the placement exam should also enroll in Chem 050. Once the placement exam results are available, the student would drop one course or the other.
- ❖ Transfer students who have received a C or better in a college-level chemistry course will also have met the prerequisite for Chem 111.

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What appears below is a copy of the instructions that accompany the Chemistry 050 placement test. Following the instructions are a few sample questions. You will be supplied with a periodic table, but you need to **bring a non-text entry scientific calculator, #2 pencil and photo ID.**

Chem 050 Placement Exam Instructions

1. You may take this exam more than one time under the following conditions:
 - a. You must wait A MINIMUM of two months to take this exam again.
 - b. The exam may be repeated ONLY during the scheduled times.

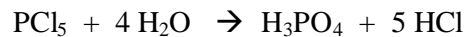
Students enrolled in Chem 050 in a given semester are not eligible to take the placement exam when it is offered during preregistration advising for the next semester.

2. In order to pass this test you must get a score of 60% or better. (The "real" test will have 25 questions, so you must get a minimum 15 out of 25 questions correct.)
3. You are not allowed to remove the exam or any related materials from the test site.
4. The exam will be changed each time it is given.
5. In order to take the exam, you need to bring a picture ID, non-text entry scientific calculator, and a #2 pencil

6. One gram of alum, $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$, contains 1.3×10^{21} Al atoms. How many oxygen atoms are contained in 1.0 g alum?

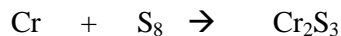
- a) 1.3×10^{21} atoms
b) 2.6×10^{22} atoms
c) 1.6×10^{22} atoms
d) 1.0×10^{22} atoms
e) 2.1×10^{22} atoms

7. If 12.0 g of PCl_5 reacts completely with water in the balanced chemical reaction below, how many grams of HCl will be produced?



- a) 10.5 g
b) 2.10 g
c) 0.420 g
d) 0.0952 g
e) 60.0 g

8. When the equation below is properly balanced, what is the coefficient for S_8 ?



- a) 1
b) 2
c) 3
d) 4
e) none of these

9. An antacid tablet containing 0.50 g of NaHCO_3 is dissolved in 250 mL of water. What is the molar concentration of NaHCO_3 in the solution?

- a) 0.024 M
b) 4.1 M
c) 0.0020 M
d) 0.0060 M
e) 2.0 M

10. What is the molar mass of H_2O ?

- a) 16.00 g/mol
b) 18.0 g/mol
c) 32.0 g/mol
d) 2.0 g/mol
e) 34.0 g/mol

11. How many mL of 0.250 M H_2SO_4 is required to completely react with 25.0 mL of 1.500 M NaOH?

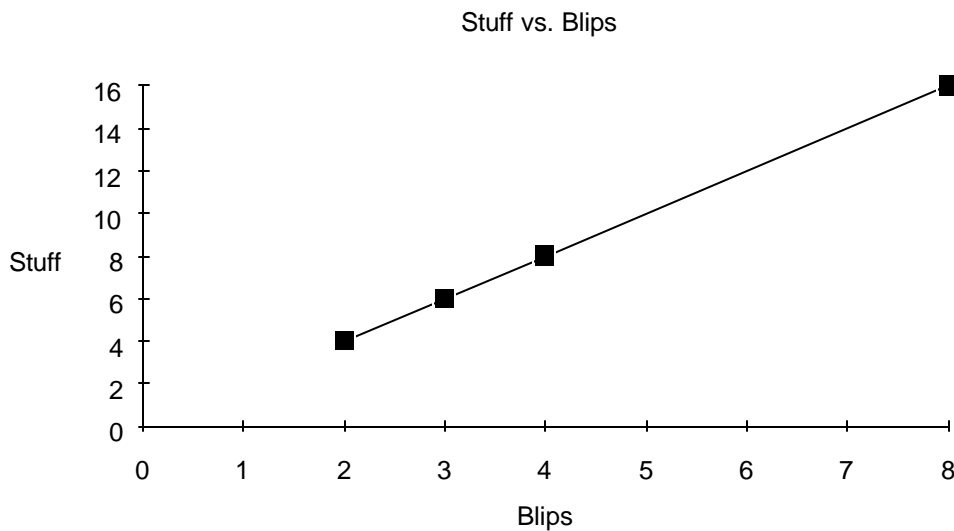
- a) 150. mL
b) 50.0 mL
c) 300. mL
d) 75.0 mL
e) none of the above

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12. Assume that you are a physician administering a drug in a solution containing 5.0 mg drug/L solution. If the recommended dosage of the drug is 3.5×10^{-6} g per kilogram of body weight, what volume of solution would you prescribe daily for a 150 lb patient (1 lb = 454 g)?

- a) 97 mL d) 23 mL
b) 53 mL e) 48 mL
c) 86 mL

13. Data was collected on an experiment that relates "Stuff" to "Blips". Using a "best fit" line for the data, how much stuff would I have if I had 20 blips?



- a) 0 b) 10 c) 20 d) 30 e) 40
14. How many grams of calcium bromide are in 50.0 mL of a 0.25 M calcium bromide solution?
- a) 2.5 g b) 1.5 g c) 1.3×10^{-2} g d) 24 g e) 40. g

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Answers:

1. a
2. d
3. d
4. c
5. b
6. b
7. a
8. c
9. a
10. b
11. d
12. e
13. e
14. a