

Sample Questions for Chem 161 Placement Exam

1. $5x - 3(x - 6) + 2(y - 4) =$

- (1) $2x + 2y - 26$ (2) $-3x + 2y + 20$ (3) $2x + 2y + 10$
(4) $-3x + 2y + 2$ (5) $2x + 2y - 10$

2. If $5^x = 8$ then $x =$

- (1) $\frac{8}{5}$ (2) $\frac{5}{8}$ (3) $\log_5 8$ (4) $\log_8 5$ (5) $\log_{10} \left(\frac{8}{5} \right)$

3. The number 3.90×10^9 has how many significant figures?

- (1) 2 (2) 3 (3) 4 (4) 9 (5) 13

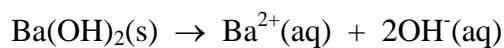
4. Which bond is most polar?

- (1) H-H (2) H-C (3) H-N (4) H-F (5) H-Cl

5. For the isotope $^{17}\text{O}^{2-}$, the number of protons, neutrons, and electrons is

- (1) 6 protons, 9 neutrons, and 6 electrons
(2) 8 protons, 8 neutrons, and 8 electrons
(3) 8 protons, 17 neutrons, and 8 electrons
(4) 8 protons, 9 neutrons, and 10 electrons
(5) 7 protons, 10 neutrons, and 10 electrons

6. Barium hydroxide dissolves as follows.



How many moles of Ba(OH)_2 are required to make 1.0 L of solution in which the OH^{-} concentration is 0.050 M?

- (1) 0.025 (2) 0.050 (3) 0.10 (4) 2.0 (5) 0.15