Dear Student:

Please take this assessment test if you are enrolled in Chemistry at New Hope. **Then ask your parent to scan and email your completed test – along with his/her Parent Questionnaire – to Ginny Pinho at** **ginny.pinho@newhopetutorials.org** **within two weeks of your enrollment.** \**Please note that this class is open to students in grades 9-12.*

This test may serve as a tool in placing you in the section where you will be most comfortable, with other students whose math background is similar to yours. Therefore, it is important that you answer these questions to the best of your ability *on your own, without help.* A few questions cover material that you may not have been taught in Algebra I, so do not worry if you are unable to answer every question! Be sure to read each question and answer choice carefully. Do not use a calculator except where noted.

**1.** Solve:

(a) 2 + 6 × 10 - 32

(b) (1 + 27 / 3)2

(c) (-3)2

(d) -32

(e) log5125

**2.** You may use a calculator to answer questions (a) through (c):

(a) 11 is what percent of 50?

(b) What is 20 after being increased by 15%?

(c) What is 98 after being decreased by 25%?

**3.** True/False; if false, give the correct answer.

(a) 2980 = 298

(b) x2 \* x5 = x10

(c) x2 / x5 = x-3

(d) x-7 = 7/x

**4.** The table below is printed on the back of a box of pancake mix:

|  |  |  |
| --- | --- | --- |
| **pancakes** | **amount of mix** | **amount of water** |
| 6 | 1 cup | 2/3 cup |
| 12 | 2 cups | 1 1/3 cups |
| 18 | 3 cups | 2 cups |

Answer:

(a) What is the ratio of mix to water in each case?

(b) What quantities of mix and water should be used if we want to make 15 pancakes?

(c) What quantities of mix and water should be used if we want to make 60 pancakes?

**Multiple Choice** – Give the letter of the correct answer for each problem:

**5.** Round 10.299 to the closest whole number.

|  |  |
| --- | --- |
| a. | 10 |
| b. | 10.1 |
| c. | 10.2 |
| d. | 10.3 |
| e. | 11 |

**6.** Express the product using scientific notation: 7 x 103 x 2 x 104 =

|  |  |
| --- | --- |
| a. | 14 x 105 |
| b. | 14 x 107 |
| c. | 140,000,000 |
| d. | 1.4 x 108 |
| e. | 1.4 x 107 |

**7.** Which property allows me to state that 2•5+3+1 = 3+1+2•5?

|  |  |
| --- | --- |
| a. | Commutative |
| b. | Associative |
| c. | Distributive |
| d. | Closure |
| e. | No property: not a true statement |

**8**. Express .125 liters in milliliters (ml).

|  |  |
| --- | --- |
| a. | 0.125 l |
| b. | 1.25 ml |
| c. | 12.5 ml |
| d. | 125 ml |
| e. | 125 l |

**9**. Solve for x: log3 x = 4

|  |  |
| --- | --- |
| a. | 81 |
| b. | 7 |
| c. | 64 |
| d. | 12 |
| e. | 4/3 |

**10**. 2\*4-9/2=?

|  |  |
| --- | --- |
| a. | 3.5 |
| b. | -.5 |
| c. | 6 |
| d. | -5 |
| e. | 1 |

Solve for x in each problem. Consider each letter to be a variable.

**11**. al •\_x\_\_ = ra **12**. ch • \_e\_ • try = 1

 geb mis x