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CHEMIST

CHALLENGE™

2019-2020
STUDENT PRACTICE QUESTIONS

CHEMICAL
EDUCATIONAL
FOUNDATION®

Practice 1. Hoping to discover why the water at school has a different taste than the water at home, Nico collects 2 samples from the kitchen sink at home and 2 samples from the water fountain at school and tests the pH of each sample using universal indicator. What is – (a) the independent variable and (b) the dependent variable in the experiment described? *Be sure to clearly label your responses as a and b.*

Practice 2. Based on the portion of the periodic table shown below, what are **2 properties** that will always be true about neutral pure samples of both of the elements pictured? *Only name 2 properties, responses with more than 2 properties listed will not be scored.*



Practice 3. Draw the Lewis Structure for a chlorine ion with a -1 charge.

Practice 4. An atom with the most common ionic charge of +1 is found in the sixth period on the periodic table and has a mass number of 133. If the atom is in its most common ionic form - (a) What is the chemical symbol for the element, (b) how many protons does it have, (c) how many neutrons does it have, and (d) how many electrons does it have? *Be sure to clearly label your responses with a, b, c, and d.*