

Answer the questions on a separate paper. Show all your work.

Name: _____

1. What are the names of the following elements?

- (a) (1 point) Na
- (b) (1 point) Pb
- (c) (1 point) N
- (d) (1 point) K
- (e) (1 point) Fe

2. Reduce the following fractions:

- (a) (1 point) $\frac{120}{400}$
- (b) (1 point) $\frac{12}{74}$
- (c) (1 point) $\frac{x^2-1}{x+1}$
- (d) (1 point) $\frac{2x^2+4x+2}{x^2-1}$

3. Convert the following measurements:

- (a) (1 point) how many inches in 3 yards?
- (b) (1 point) how many tablespoons in one gallon?
- (c) (1 point) how many pounds in 373 ounces?
- (d) (1 point) how many kilograms in 1,000,000,000 grams?
- (e) (1 point) how many centimeters in 375 meters?

4. (5 points) What is 12.0×3.21 ? Choose the correct answer:

- A. 38
- B. 38.5
- C. 38.52
- D. 38.520
- E. 38.5200

5. (5 points) What is $12.0 + 3.21$? Choose the correct answer:

- A. 15.2

- B. 15.21
 - C. 15.210
 - D. 15.2100
 - E. 15.21000
6. (1 point) How much wood would a woodchuck chuck if a woodchuck could chuck wood?
 7. (5 points) The boiling point of water in Seattle is 212°F , the boiling point of water in Moscow is 206°F . Why is it lower in Moscow?
 8. Give definitions for the following:
 - (a) (1 point) heat
 - (b) (1 point) electrolyte
 - (c) (1 point) acid
 - (d) (1 point) base
 - (e) (1 point) energy
 9. Solve the following equations for the named variable:
 - (a) (1 point) $12 = \frac{2}{5}x$ (solve for x)
 - (b) (1 point) $3t - 17 = 22$ (solve for t)
 - (c) (1 point) $\frac{y^2-1}{y+1} = 0$ (solve for y)
 - (d) (1 point) $5\beta + 12 = 2\beta$ (solve for β)
 - (e) (1 point) $\frac{2\theta-1}{2\theta+1} = 3$ (solve for θ)
 10. (5 points) What happens when you leave an ice tray full of water the deep freezer for several days? Choose all the correct answers.
 - A. the water gets warmer
 - B. the molecules in the water slow down
 - C. the water undergoes a physical change from liquid to gas
 - D. the water changes phase from liquid to solid
 - E. the water undergoes a chemical change from liquid to solid
 11. (5 points) Which of the following is an example of a chemical reaction?
 - A. a piece of wood burns in a bonfire
 - B. a piece of steak is fed into a meat grinder
 - C. one gram of table salt is dissolved into a glass of water
 - D. a pan of water is brought to a boil, and left boiling until it is dry

E. vinegar and baking soda are combined in a cup and they produce a whole lot of foam

This exam has 11 questions for a total of 50 points.