

Nature of Science Unit review guide (Chapter 1 in text book)

Test Date: _____

Without using your notes, try to complete this review guide. Look at your notes only if you get stuck

Vocabulary

Be able to define and understand these vocabulary terms and know the differences between them

1. Accuracy
2. Estimation
3. Reproducibility
4. Precision
5. Hypothesis
6. Inference
7. Claim
8. Evidence
9. Length

Scientific Tools and Units

You must know the (A) TOOL **AND** (B) UNIT OF MEASUREMENT used for the following:

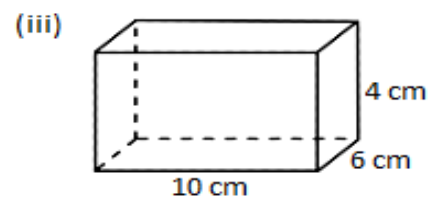
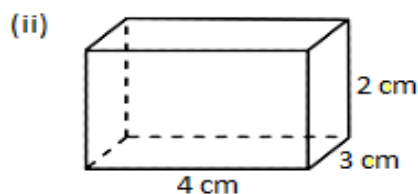
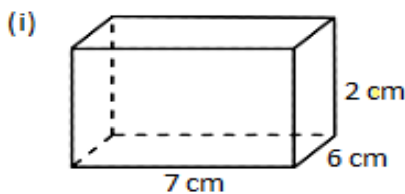
10. MASS: (A) _____ (B) _____

11. LENGTH/DISTANCE: (A) _____ (B) _____

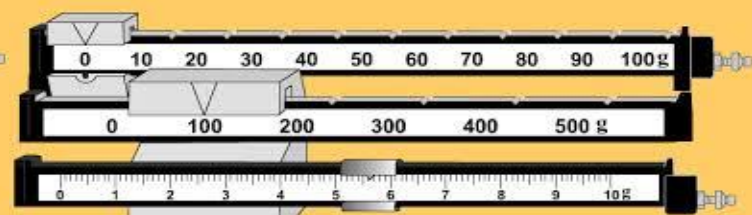
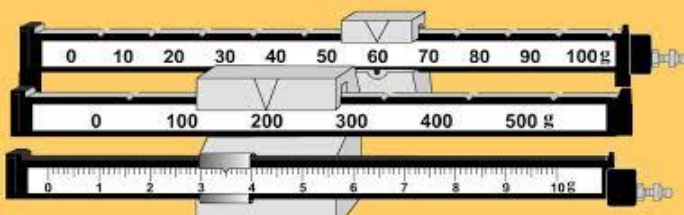
Measurement Skills:

You must be able to determine the following:

12. Volume of a solid cube:



13. Read each triple- beam balance:



A: _____

B: _____

14. Measure the length of each line:



15. Round each number to the nearest tenth (0.1)

- A. 123.265
- B. 48.36
- C. 1562.84
- D. 1989752.3579

Interpreting Data:

Type of Soap	Diameter of Bubble					
	TRIAL 1	TRIAL 2	TRIAL 3	TRIAL 4	TRIAL 5	AVERAGE
Degreaser	18.6	19.3	5.4	20.7	17.1	
All-Natural	21.3	22.0	21.9	24.8	19.7	
With Lotion	15.2	16.1	14.9	15.6	16.5	

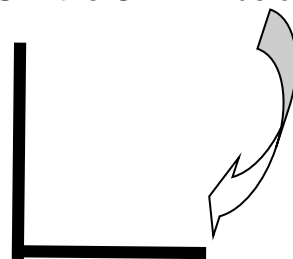
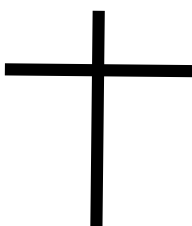
Using the data table above, answer the following questions:

16. What TWO THINGS are missing from the data table?
17. Which type of soap had the largest average?
18. Which set of numbers is the most “reproducible?”
19. Circle the MANIPULATED VARIABLE for each of the following questions below:
 - How does the amount of exercise affect your pulse rate?
 - How does the amount of water a mouse drinks affect its weight?
 - How does changing the color of light impact the growth of a plant?
20. Underline the RESPONDING VARIABLE for each of the following:
 - How will changing the number of questions asked in class impact test scores?
 - How does the size of the motor affect speed?

SEA OTTERS

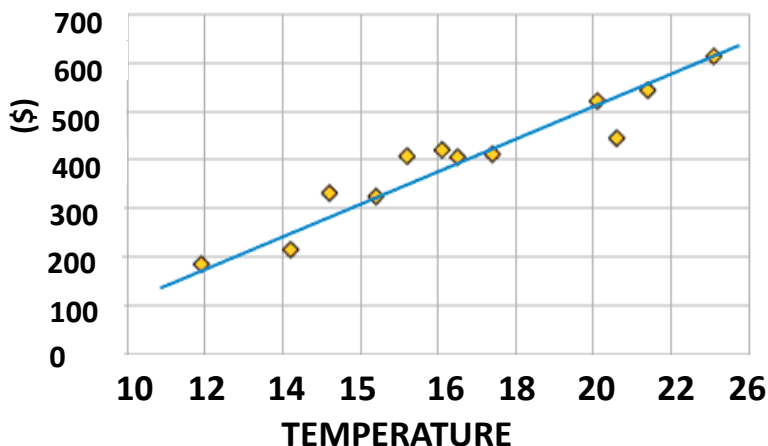
The Fish and Game Department wanted to know why so many fish were dying in local lakes. They wondered if the temperature of the water was the cause of the deaths. They recorded the temperature of several of the lakes and counted the number of dead fish each week. Help them organize their data.

21. CORRECTLY place the MANIPULATED and RESPONDING VARIABLES in the T-Chart below
22. CORRECTLY place the MANIPULATED and RESPONDING VARIABLES in the GRAPH below
23. Write the appropriate TITLE for the data table and graph below



Interpreting Graphs

24. Using your criteria page (APPENDIX C), identify what pieces are missing OR wrong in the GRAPH below (THERE ARE 4)



MISTAKES ON GRAPH:

- 1.
- 2.
- 3.
- 4.

25. What “trend” do you see on the graph (How does a change in x effect y)?