

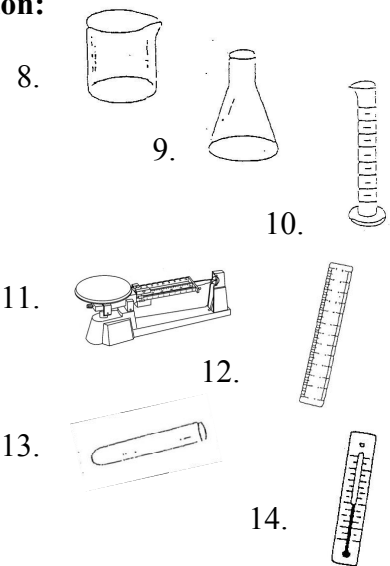
Unit 1 Test Review: Scientific Processes

Answer the following safety questions:

1. What are the first two steps when performing any experiment?
_____ and _____
2. What should you do if glassware is broken during a lab? _____
3. What type of footwear should you wear in the lab? _____
4. How should you smell vapors from a container? _____
5. What should you do at the end of an experiment? _____
6. What is the most important piece of safety equipment? _____
7. What should you do if a chemical gets in your eye? _____

Label each tool, write the SI unit for that tool, and describe its function:

8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____



Answer the following questions regarding the SI (metric) system of measurement:

15. What is the base unit for measuring length in the SI system? _____
16. What is the base unit for measuring mass in the SI system? _____
17. What is the base unit for measuring liquid volume in the SI system? _____
18. What is the base unit for measuring solid volume in the SI system? _____
19. What is the base unit for temperature in the SI system? _____
20. At what temperatures does water freeze and boil in the SI scale? _____ & _____.

Answer the following questions about the Scientific Method:

Put the steps of the scientific method in order:

21. _____
22. _____
23. _____
24. _____, which includes _____ and _____.
25. _____
26. _____
27. _____

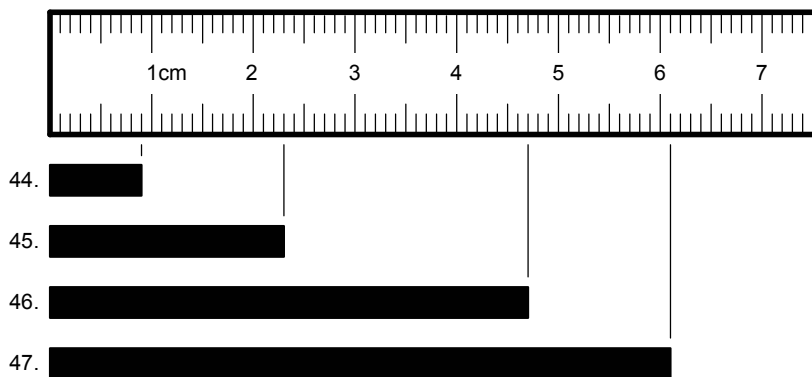
28. Which step makes a prediction about what will happen and why? _____
29. Which step is stated in the form of a question? _____
30. In which step is the data averaged and graphs of the data prepared? _____
31. In what step will your hypothesis accepted, restated, or rejected and your opinion about the experiment stated? _____
32. Which group stays the same in your experiment? _____
33. Which group changes in your experiment? _____
34. What change relies on another change to occur? _____
35. Quantitative data is based on what? _____
36. Give examples of quantitative data – _____
37. Qualitative data is based on what? _____
38. Give examples of qualitative data - _____
39. In what form should you state a hypothesis? _____

Read the following experiment and identify the control, independent variable, dependant variable and state the conclusion:

I wanted to test whether food coloring added to water will cause carnation petals to change color. I thought that it would. I placed one white carnation in a vase of regular water. Next to it, I placed one white carnation in a vase of water with blue food coloring. I observed the flowers for a week, noting the change. At the end of the week, the carnation in the blue colored water had indeed changed to a blue color!

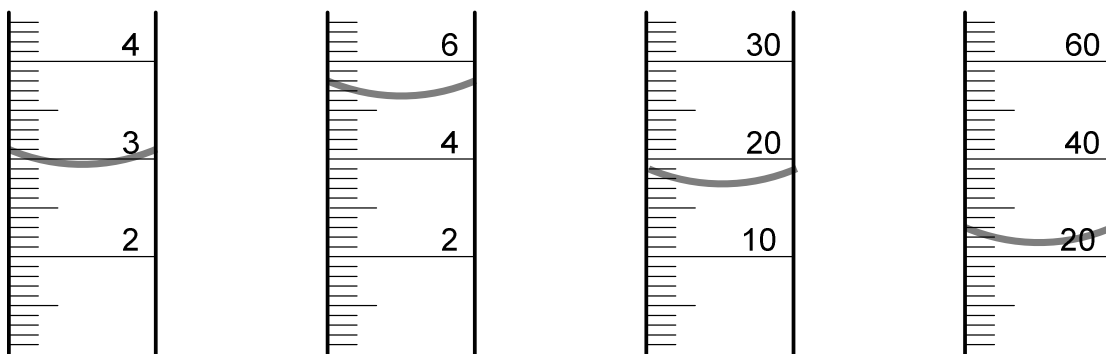
40. Control – _____
41. Dependant Variable – _____
42. Independent Variable – _____
43. Conclusion – _____

State the length of the following four bars, in both millimeters and centimeters, reading from the enlarged meter stick.



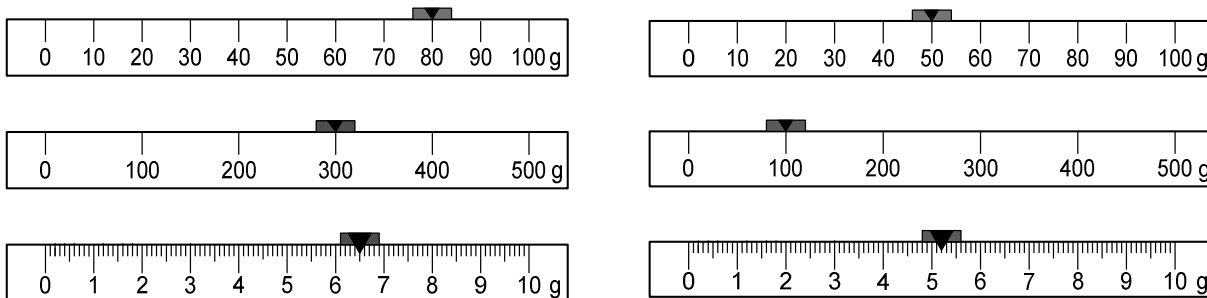
44. _____ mm _____ cm 45. _____ mm _____ cm
 46. _____ mm _____ cm 47. _____ mm _____ cm

State the liquid volume in milliliters in the following four graduated cylinders.



48. _____ mL 49. _____ mL 50. _____ mL 51. _____ mL

State the mass in grams for the following two triple-beam balances.



52. _____ g 53. _____ g