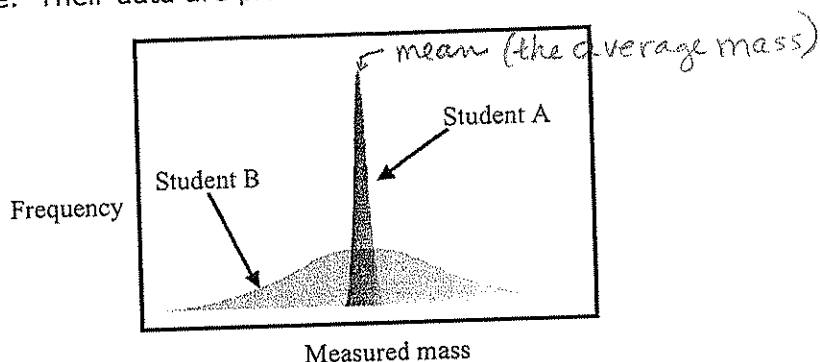


6. A student with a lot of time on her hands weighs a billion pennies using a laboratory balance. Another student measures the same set of pennies but uses a different balance. Their data are plotted below.



- a. Label the graph to show the mean value that Student A obtains
 b. Which student's data are more precise? A (more closely spaced)
 c. Is the magnitude of σ for data set A the same, larger, or smaller than that for data set B? smaller (less 'spread')

7. The compound lithium hydrogen sulfate is a source of lithium, hydrogen, and sulfate ions. What are the charges of each of these ions?

lithium ion: Li^+ hydrogen ion: H^+ sulfate ion: SO_4^{2-}

8. There are many compounds composed of just nitrogen and oxygen. The name for N_2O_5 is...

dinitrogen pentoxide

9. The orthoborate ion has the formula BO_3^{3-} . The formula of magnesium orthoborate must be...
 Mg^{2+} (a Group II element)

$\text{Mg}_3(\text{BO}_3)_2$

10. Compare the formula to the name. If the formula does not match the name, CORRECT THE FORMULA (not the name) so that the formula and name match.

a. H^+ $\text{C}_2\text{H}_3\text{O}_2^-$ hydrogen acetate $\text{HC}_2\text{H}_3\text{O}_2$ o.k.
 (or acetic acid)

b. Fe^{2+} S^{2-} iron(II) sulfide FeS FeS

c. NH_4^+ Cl^- ammonium chloride NH_3Cl NH_4Cl

d. K^+ F^- potassium fluoride KF o.k.

e. Na^+ NO_3^- sodium nitrate NaNO_3 o.k.

