

Chapter 2 HDL

1. Here are the results of several mass measurements. In which is the change stated correctly?

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2. Do you need to know the individual masses of the samples of salt and water in order to measure the change in mass when the two samples are mixed?

No, it is only necessary to measure the mass of the salt and water together before they are mixed.

3. In Experiment 2.1, The Mass of Dissolved Salt, how could you recover the dissolved salt? How do you think its mass would compare with the mass of dry salt you started with?

You could evaporate the water from the mixture of water and salt. The mass would be the same as the original mass of the dry salt and would not change at all.

4. If the change in mass in Experiment 2.1, The Mass of Dissolved Salt, were -0.0001g , would you have observed this change using your balance?

No, the balance is not precise enough to measure changes that small.

5. a. In daily language we express the sign (plus or minus) of a change by using different words.

For example, Elizabeth gained 1kg , Tom lost 2kg . Express these statements in terms of change in mass.

b. In the morning the temperature rose from 10°C to 14°C . In the afternoon the temperature fell from 16°C to 11°C , what were the changes in temperature in the morning and in the afternoon?

6. Consider a histogram that has an interval whose boundaries are -0.01g and $+0.01\text{g}$. Which of the values (in grams) given below should be counted in this interval?

7. a. What is the interval immediately to the left of the interval containing zero in Figure 2.1?

8. a. What interval is immediately to the right of zero in Figure 2.5?