

3.5: Analysis

Reaction Time

1. Draw a table in which to record the average distance the ruler fell for each person on your team. Calculate and record the average distance the ruler fell, in centimeters, as you attempted to grasp it. Also record the average distance the ruler fell for each of your team members.

Table 3.5.1: Reaction Time Averages

Team Member	Average Distance (centimeters)

2. Based on the data, who has the best reaction time? Explain.
3. List two possible sources of error in the reaction time experiment, and state whether each error was random or systematic.

Burning Candle

4. If your candle had been allowed to burn for 30 minutes, what do you predict the change in length, from pre to post burn, would have been? Explain your reasoning.
5. Describe the change in length of the candle that occurs while it is burning. Is there a steady decrease in height? Explain.
6. List two possible sources of error in the burning candle experiment. For each error, state whether it was a random error or a systematic error.

Clocks

7. Is it possible to measure the precision from the data you obtained in this mini-experiment? Explain.
8. List two possible sources of error in the clocks experiment. For each error, state whether it was a random error or a systematic error.

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