UNIT I: Scientific Thinking in Experimental Settings ANSWER SHEET (v2)

1. ___ 5. ___ 9. ___ 14. ___  
2. ___ 6. ___ 10. ___ 15. ___  
3. ___ 7. ___ 11. ___ 16. ___  
4. ___ 8. ___ 12. ___ 17. ___  
13. ___

18. Tommy let a marble roll down the hill outside his house. He released it from the same place 4 times and recorded the following times. Express the average time using the correct number of significant digits.

   **Time (s)**
   11.543
   11.551
   11.539
   11.544

   **Answer:**

19. Express the width of the piece of paper, to the correct number of significant figures, measured with the meter stick below

   ____
20. The following graph represents the relationship between the weight someone can bench press and the time spent in training:

![Graph showing the relationship between weight and time in training.]

**Statistics:**
- **Data Set 1:** Slope 20.0±0.00, Y Intercept 110±0.00, C.O.R. 1.00

**a.** What is the dependent variable? ________________

**b.** What is the independent variable? ________________

**c.** Express the relationship using a mathematical model:

**d.** What is the value and unit for the slope?

**e.** What is the value, unit and meaning of the vertical intercept?

**f.** Predict the weight the person could bench press after 8 months of training, assuming the rate of improvement remains constant.