***Lab Manual for Human Anatomy and Physiology, 4e* (Martin)**

**Chapter 1 Scientific Method and Measurements**

1) The first step of the scientific method is making observations.

2) Which step of the scientific method involves forming a tentative explanation of information?

A) Hypothesis

B) Observations

C) Conclusion

D) Experiment

E) Data analysis

3) In the metric system, 1 cm is equal to \_\_\_\_\_\_\_\_ mm.

A) 100

B) 1,000

C) 0.1

D) 10

E) 0.01

4) The final step in the scientific method is data analysis.

5) The difference between an independent variable and a dependent variable is that the dependent variable

A) can be changed.

B) is derived from the experimental results.

C) is determined before the experiment is conducted.

D) is equivalent to the hypothesis.

E) is equivalent to the observations.

6) In the metric system, a liter (L) is a unit that measures

A) mass.

B) time.

C) length.

D) temperature.

E) volume.

7) In the metric system, a gram (g) is a unit of mass.

8) Which of the following is NOT a component of the scientific method?

A) Conclusions

B) Experiment

C) Theory

D) Hypothesis

E) Observations

9) According to the hypothesis you tested in this experiment, the ratio of a person's upper limb length to body height is approximately 50%.

10) Which component of the scientific method involves organizing results as tables, graphs, or drawings?

A) Conclusions

B) Observations

C) Data analysis

D) Experiment

E) Theory

11) When drawing a graph to display experimental data, the independent variable is plotted along the x-axis.

12) Knowing that there are 2.54 cm per inch, a person that is 5'5" in height would be \_\_\_\_\_\_\_\_ cm tall.

A) 16.51

B) 165.1

C) 25.4

D) 25.6

E) 255.9

13) An important feature of a hypothesis is that it has to be \_\_\_\_\_\_\_\_.

A) a known fact

B) true

C) a widely accepted theory

D) false

E) testable

14) When conducting an experiment to test a hypothesis, only one changeable factor is studied; this is called a variable.

15) When plotting data on a graph, drawing the line of best fit involves placing all of the data points on the line.