Name _____   **Date** _____

01b - Measurements and Mathematics

____ 1. Which is a derived unit?

    A) meter   B) second   C) kilogram   D) Newton

____ 2. The fundamental unit of mass in the mks system is the

    A) milligram   B) gram   C) kilogram   D) decigram

____ 3. A unit of mass is the

    A) joule   B) kilogram   C) Newton   D) watt

____ 4. A round dinner plate has a diameter closest to

    A) 2×10^{-2} m   B) 2×10^{-1} m   C) 2×10^{0} m   D) 2×10^{1} m

____ 5. The height of an individual step on a staircase is closest to

    A) 2.0×10^{-2} m   B) 2.0×10^{-1} m   C) 2.0×10^{0} m   D) 2.0×10^{1} m

____ 6. The height of a typical kitchen table is approximately

    A) 10^{-2} m   B) 10^{0} m   C) 10^{1} m   D) 10^{2} m

____ 7. Which measurement is closest to 1×10^{-2} meter?

    A) diameter of an atom   B) width of a student's finger
    C) length of a football field   D) height of a schoolteacher

____ 8. The height of a 30-story building is approximately

    A) 10^{0} m   B) 10^{1} m   C) 10^{2} m   D) 10^{3} m

____ 9. The approximate length of an unsharpened No. 2 pencil is

    A) 2.0×10^{-2} m   B) 2.0×10^{-1} m   C) 2.0×10^{0} m   D) 2.0×10^{1} m

____ 10. The length of a football field is closest to

    A) 1000 cm   B) 1000 dm   C) 1000 km   D) 1000 mm

____ 11. What is the approximate diameter of an inflated basketball?

    A) 2×10^{-2} m   B) 2×10^{-1} m   C) 2×10^{0} m   D) 2×10^{1} m

____ 12. The mass of a paper clip is approximately

    A) 1×10^{6} kg   B) 1×10^{3} kg   C) 1×10^{-3} kg   D) 1×10^{-6} kg

____ 13. The weight of a chicken egg is most nearly equal to

    A) 10^{-3} N   B) 10^{-2} N   C) 10^{0} N   D) 10^{2} N

____ 14. What is the approximate length of a baseball bat?

    A) 10^{-1} m   B) 10^{0} m   C) 10^{1} m   D) 10^{2} m

____ 15. The length of a dollar bill is approximately

    A) 1.5×10^{-2} m   B) 1.5×10^{-1} m   C) 1.5×10^{1} m   D) 1.5×10^{2} m

____ 16. What is the approximate mass of an automobile?

    A) 10^{1} kg   B) 10^{2} kg   C) 10^{3} kg   D) 10^{6} kg

17. The approximate height of a 12-ounce can of root beer is

    A) 1.3×10^{-3} m B) 1.3×10^{-1} m C) 1.3×10^{0} m D) 1.3×10^{1} m

18. An egg is dropped from a third-story window. The distance the egg falls from the window to the ground is closest to

    A) 10^{0} m   B) 10^{1} m   C) 10^{2} m   D) 10^{3} m

19. The diameter of a United States penny is closest to

    A) 10^{0} m   B) 10^{-1} m   C) 10^{-2} m   D) 10^{-3} m

20. What is the approximate width of a person's little finger?

    A) 1 m   B) 0.1 m   C) 0.01 m   D) 0.001 m