Name _____

Unit Conversion, Scientific Notion, Distance vs Displacement WS 1

1. 125 g to kg

2. 21.3 Km to cm

3. 3.34 mm to cm

4. 728 nm to m

5. 40.4 km to cm

6. 1.23 ml to L

7. 8.32 cg to mg

8. 8.98 mg to g

9. 50.1 mm to km

10. 30 m/s to mph

11. $[3.0 \times 10^{-3}][2.0 \times 10^5] =$

12. $\dfrac{[4.6 \times 10^1][2.1 \times 10^{-4}]}{[1.64 \times 10^{34}]} =$

13. $\dfrac{[2.3 \times 10^{14}]}{[4.17 \times 10^9]} =$

14. $[27.3 \times 10^{-22}][2.0 \times 10^{18}] =$

15. $\dfrac{[4.2 \times 10^{14}][9.4 \times 10^7]}{[6.4 \times 10^9]} =$

16. $[789.23 \times 10^2][0.0045 \times 10^{15}] =$

17. $\dfrac{[1.7 \times 10^9][3.9 \times 10^7]}{[1.40 \times 10^{-6}]} =$

18. $\dfrac{[4.50 \times 10^9]}{[6.636 \times 10^{-34}]} =$

19. $\dfrac{[7.4 \times 10^6][1.9 \times 10^{-3}]}{[5.3 \times 10^6][1.7 \times 10^{-8}][2.4 \times 10^5]} =$

Distance versus displacement

1. A baseball player runs 27.4 meters from the batter's box to first base, overruns first base by 3.0 meters, and then returns to first base. Compared to the total distance traveled by the player, what is the magnitude of the player's total displacement from the batter's box?

2. Hansel and Gretel walk 6 km north, 4 km east and then 3 km south

    a. How many km did they walk?

    b. What is their displacement from home?

3. The high school is 12 km from my home.

    a. If I only drive to and from work, how far do I drive each day?

    b. What is my displacement for the day?