

Dimensional Analysis Problems

(use your conversion factor sheet given to you in class)

You must show ALL work—do not skip steps!!

1. 3 hr = ___ seconds

2. 0.035 mg = ___cg

3. 5.5 kg = ___lbs

4. 2.5 yd = ___inches

5. 1.3 yr = ___hr

6. 3 moles = ___ molecules

7. 2.5×10^{24} molecules = ___ moles

8. 5 moles = ___ liters

9. 3.2×10^9 mm = ___yd

10. 420 mi = ___mm

11. 90 metric tons = ___ kg

12. 2.5 gal = ___ liters

13. 10 ft = ___ m

14. 1 ton = ___ Mg

15. $\frac{40 \text{ mi}}{\text{hr}} = \frac{\text{mm}}{\text{min}}$

16. 25 gal/min = _____ mL/sec

Selected answers:

3. 12.1 lb 7. 4.15 moles 9. 3.5×10^6 yd 16. 1575 mL/sec