Chemistry - The Measure of Science Worksheet

1. State the number of significant figures in each measurement.
   - a. 2804 m
   - b. 2.84 m
   - c. 0.0029 m
   - d. 0.003068 m
   - e. 4.6×10^5 m
   - f. 4.06×10^5 m

2. State the number of significant figures in each measurement.
   - a. 75 m
   - b. 75.00 mm
   - c. 0.007 060 kg
   - d. 1.87×10^6 mL
   - e. 1.008×10^8 m
   - f. 1.20×10^{-4} m

3. Add 6.201 cm, 7.4 cm, 0.68 cm, 12.0 cm

4. Subtract 8.264 g from 10.8 g

5. Perform the following multiplications with the correct number of significant figures
   - a. 131 cm × 2.3 cm
   - b. 3.2145 km × 4.23 km

6. Perform the following divisions with the correct number of significant figures
   - a. 20.2 cm ÷ 7.41 s
   - b. 3.1416m ÷ 12.4 s

7. Perform the following multi-step problem and state your answer with the right amount of significant figures.
   - a. $6.5\ m + (\frac{2.465m^2}{1.28m})$
   - b. $4.3^2 + 3.56^2$

8. Solve the following equation for b. $y = mx + b$

9. Solve the following equations for v
   - a. d = vt
   - b. $t = \dfrac{d}{v}$
   - c. $a = \dfrac{v^2}{2d}$
   - d. $\dfrac{v}{a} = \dfrac{b}{c}$

10. Solve each of these equations for E
    - a. $f = \dfrac{E}{s}$
    - b. $m = \dfrac{2E}{v^2}$
    - c. $\dfrac{E}{C^2} = m$

11. Solve the equation $v_f^2 = v_i^2 + 2ad$ for d

12. Solve each of the these equations for a
    - a. $v_f = v_i + at$
    - b. $y = v_i t + \frac{1}{2}at^2$
    - c. $v_f^2 = v_i^2 + 2ay$
    - d. $v = \sqrt{2as}$