Physics - The Measure of Science Worksheet (Part 2)

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

 $f. 4.06 \times 10^5 \text{ m}$

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 x 2.3 cm

b. 3.2145 km x 4.23 km

6. Perform the following divisions with the correct number of significant figures

a. $20.2 \text{ cm} \div 7.41 \text{ s}$

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. $6.5 m + (\frac{2.465m^2}{1.20m})$

b. 4.3² + 3.56²

8. Solve the following equation for b.

y = mx + b

9. Solve the following equations for v

a. d = vt b. $t = \frac{d}{v}$ c. $a = \frac{v^2}{2d}$ d. $\frac{v}{a} = \frac{b}{c}$

10. Solve each of these equations for E

a. $f = \frac{E}{s}$ b. $m = \frac{2E}{v^2}$ c. $\frac{E}{C^2} = m$

- 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. $v = \sqrt{2as}$