

Physics - The Measure of Science Worksheet (Part 2 - Extra Questions)

1. State the number of significant figures in each measurement.
 - a. 5100 m
 - b. 5100.0 m
 - c. 1.0004 m
 - d. 508 m
 - e. 1.23×10^{-4} m
 - f. 6×10^9 m
2. State the number of significant figures in each measurement.
 - a. 200 m
 - b. 2.05 mm
 - c. 200.0 kg
 - d. 0.200 mL
 - e. 0.00200 m
 - f. 3.5×10^{-4} m
3. Add 4.12 cm, 6.8 cm, 0.120 cm, 9.52 cm
4. Subtract 5.4 g from 12.56 g
5. Perform the following multiplications with the correct number of significant figures
 - a. $5.4 \text{ cm} \times 6.55 \text{ cm}$
 - b. $4.1568 \text{ km} \times 2.77289 \text{ km}$
6. Perform the following divisions with the correct number of significant figures
 - a. $15.2 \text{ cm} \div 8.44 \text{ s}$
 - b. $6.258 \text{ m} \div 5 \text{ s}$
7. Perform the following multi-step problem and state your answer with the right amount of significant figures.
 - a.
$$\begin{array}{r} 5.258 \text{ cm} - 2.1 \text{ cm} \\ \hline 6.58 \text{ cm} \end{array}$$
 - b. $(3.54 \text{ mm} \times 4 \text{ mm}) + 2.85 \text{ mm}^2$
8. Solve the following equation for m .
$$y = mx + b$$
9. Solve the following equations for d
 - a. $v = \frac{d}{t}$
 - b. $r^2 = g^2 + d^2$
 - c. $a = \frac{v^2}{2d}$
 - d. $\frac{v}{a} = \frac{d}{c}$
10. Solve each of these equations for v
 - a. $f = \frac{E}{v}$
 - b. $m = \frac{2E}{v^2}$
 - c. $\frac{v}{C^2} = m$
11. Solve the equation $v_f^2 = v_i^2 + 2ad$ for v_i
12. Solve each of the these equations for v_i
 - a. $v_f = v_i + at$
 - b. $y = v_i t + \frac{1}{2}at^2$
 - c. $v_f^2 = v_i + 2ay$
 - d. $v_f = \sqrt{2v_i as}$