

Physics 112/111
Conversions and Rearranging Formulas

Perform the following conversions.

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|---------------------|-------------------------------|
| 1. 2.04 s to Gs | (2.04 x 10 ⁻⁹ Gs) |
| 2. 187 cm to m | (1.87 m) |
| 3. 0.926 pg to g | (9.26 x 10 ⁻¹³ g) |
| 4. 21 Mm to μm | (2.1 x 10 ¹³ μm) |
| 5. 2748 kg to ng | (2.748 x 10 ¹⁵ ng) |
| 6. 0.0512 ms to Ts | (5.12 x 10 ⁻¹⁷ Ts) |
| 7. 40.17 μg to cg | (4.017 x 10 ⁻³ cg) |
| 8. 0.213 nm to pm | (213 pm) |
| 9. 2.96 m/s to km/h | (10.7 km/h) |
| 10. 115 km/h to m/s | (31.9 m/s) |

Solve each equation for the variable in the square brackets.

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|----------------------------------|---|
| 1. $A = \frac{1}{2}bh$ [b] | 9. $\frac{x}{L} = \frac{\lambda}{d}$ [d] |
| 2. $V = \pi r^2 h$ [r] | 10. $x = \frac{b+3}{s}$ [s] |
| 3. $Ax + By + C = 0$ [x] | 11. $P = hy + s^2$ [s] |
| 4. $A = \frac{1}{2}h(a+b)$ [a] | 12. $\frac{f_o}{f_s} = \frac{v-v_o}{v+v_s}$ [v _s] |
| 5. $F = \frac{9}{5}C + 32$ [C] | |
| 6. $b = \sqrt{c^2 - a^2}$ [c] | |
| 7. $v = \sqrt{\frac{2K}{m}}$ [K] | |
| 8. $h = \frac{A-2lw}{2w+2l}$ [l] | |