

Physics Skills

PART II. EQUATIONS

Often Physics problems are done with variables only. Solve each equation for the variable indicated. Show ALL your work leading to the answer.

1. $x = vt$ **Solve for v**

2. $F = ma$ **Solve for m**

3. $F = ma$ **Solve for a**

4. $F_T - F_g = ma$ **Solve for a**

5. $F_T - F_g = ma$ **Solve for F_T**

6. $F_T - F_g = ma$ **Solve for F_g**

7. $v = \frac{x}{t}$ **Solve for t**

8. $y = \frac{1}{2}at^2$ **Solve for t**

9. $x = v_o t + \frac{1}{2}at^2$ **Solve for v_o**

10. $v = \sqrt{2ax}$ **Solve for x**

11. $a = \frac{v_f - v_o}{t}$ **Solve for t**

12. $a = \frac{v_f - v_o}{t}$ **Solve for v_f**

13. $KE = \frac{1}{2}mv^2$ **Solve for v**

14. $KE = \frac{1}{2}mv^2$ **Solve for m**

15. $F = \frac{Gm_1m_2}{r^2}$ **Solve for r**

16. $F = \frac{Gm_1m_2}{r^2}$ **Solve for m_2**

17. $T = 2\pi\sqrt{\frac{L}{g}}$ **Solve for L**

18. $T = 2\pi\sqrt{\frac{L}{g}}$ **Solve for g**