Textbook Introduction

September 2012 - Higgs Year

Geometry - Pg 750
Copy any formulas you do not know (9 in total)

Algebra - Pg 750
Often we will use the quadratic formula to solve $ax^2 + bx + c = 0$ for two possible real(?) values of x.
So we write $x =$

This is very similar for solving $d = v_i t + 1/2at^2$ becomes $1/2at^2 + v_i t - d = 0$ to solve for t.

Trig Functions and Identities - Pg 750-751 Draw figure 1(a) to understand the three primary functions

drawing - $\sin\theta = y/r$, $\cos\theta = x/r$, $\tan\theta = y/x$

Use the fact that $x^2 + y^2 = r^2$ and the information given above to derive that $\tan\theta = \sin\theta / \cos\theta$ and $\sin^2\theta + \cos^2\theta = 1$

Copy Figure 1(c) and state the sine and cosine laws

Dimensional Anaylsis - Pg 751

Show that these formulas make dimensional sense

$$v_2 = v_1 + a\Delta t \qquad \Delta d = v_1\Delta t + \frac{1}{2}a\Delta t^2 \qquad v_2^2 = v_1^2 + 2a\Delta d$$

$$F_G = \frac{Gm_1m_2}{d^2}$$