Math Readiness Self-Test
Physics by Discovery Class

Solve each equation for x, rounding answers to three digits. Then check your work using the solutions posted on the website. *(The problems will be more interesting in our class, because in physics each number and variable represents something real about the world such as mass, length, force, time, acceleration, current, voltage, energy, etc.!)*

1) $5 = x(3)$

2) $53 = 19 - 10x$

3) $x^2 = (4)^2 + 2(10)(9)$

4) $35 = (6)(4) + (1/2)(10)x^2$

5) $1.8 = (1/2)(3.5 + x)(4.9)$

6) $3x^2 + 2x = 7$

   Use quadratic formula: If $ax^2 + bx + c = 0$, then $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.

7) $2453 = (142)^2/x$

8) $(1/2)(200)(3)^2 + (4.5)(10)(7.3) = (1/2)(5)\, x^2$

9) $x = \dfrac{(9x\ 10^9)(4 \times 10^{-6})(4 \times 10^{-6})}{(2)^2}$

10) $\dfrac{1}{x} = \dfrac{1}{5} + \dfrac{1}{47} + \dfrac{1}{23}$