

**ALGEBRA REVIEW**

Name \_\_\_\_\_

1. Base Equation:  $v = d / t$        $v = 123 \text{ m/s}$      $t = 5 \text{ s}$        $d = ?$

2. Base Equation:  $v_f = v_i + at$        $v_f = 32 \text{ m/s}$      $v_i = 0$      $a = 8.0 \text{ m/s}^2$      $t = ?$

3. Base Equation:  $1/2mv^2 = mgh$        $g = 9.80 \text{ m/s}^2$      $h = 875 \text{ m}$      $v = ?$

4. Base Equation:  $F = \frac{Gm_1m_2}{r^2}$        $F = 132\text{N}$        $G = 6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$   
 $r = .243\text{m}$        $m_1 = 1.175 \times 10^4 \text{ kg}$        $m_2 = ?$

5. Base Equation:  $v = \sqrt{2gr_e}$        $v = 1.12 \times 10^4 \text{ m/s}$        $g = 9.80 \text{ m/s}^2$        $r_e = ?$

6. Base Equation:  $F_c = mv^2 / r$        $F = 1680 \text{ kgm/s}^2$        $m = 125 \text{ kg}$        $r = 9.00\text{m}$   
 $v = ?$

7. Base Equation:  $T = 2\pi \sqrt{L/g}$        $T = 2.94 \text{ s}$        $L = 2.15 \text{ m}$        $g = ?$