UTS in physics made by Michael Marchenko for November of 2019.

1. Describe your project. Find F = ma and M = Jε, for m = a = J = ε = T.

2. Calculate Schwarzschild radius for k grams desk. Solve oscillation problem y''+yT2=0.

3. Estimate distances between atoms of element number T in periodic table of elements.

4. Find force between two charges of L and T Coulombs, m meters apart.

5. Find hangover for s blocks in the blocks stacking problem.

6. Solve elastic collision problem for u1 = k, u2 = k/2, m1 = k, m2 = 2k.

7. Find acceleration of a simple pulley for two masses: L kg and T kg.

8. Find center of mass of k equal masses k meters apart located on straight line.

9. Calculate V1 for transformer if V2 = T volts, N1 = k and N2 = s.

10. Find electrical current i in circuit for R = T, L = 1/k, C = 1/s, ω = k, and εm = T.

11. Calculate frequency and period of harmonic oscillator. L = k μH and C = T μF.

12. Find energy level and angular momentum for hydrogen according to Bohr Model.

13. Find energy and momentum of photon with frequency of s Hz. E2 = (mc2)2 + (pc)2.

14. Calculate wavelength of k grams desk moving T centimeters per second.

15. Find annihilation energy of k grams of matter.