Physics worksheet for 20.10.2017.

s is your student number. k = s mod 10000. T = s mod 100. m = s mod 35. a = s mod 25.

L = s mod 10. $d\_{2}=\frac{T-L}{10}$. e = s mod 8. m7 = s mod 7. m6 = s mod 6. m5 = s mod 5. m4 = s mod 4.

m3 = s mod 3. m2 = s mod 2. u = s + 10000.

1. Find gravity acceleration g, orbital velocity Vo and escape velocity Ve for planet with mass s billion tons and radius s millimeters.

https://physics18.weebly.com/uploads/5/9/8/5/59854633/g1orbital1velocity1escape1velocity13oct2017.txt

2. Calculate the Schwarzschild radius for the k grams desk.

http://physics16.weebly.com/uploads/5/9/8/5/59854633/radius4schwarzschild.txt

3. Find the displacement of a harmonic oscillator after s seconds with amplitude k, frequency k and initial phase k/2.

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/harmonic4oscillator.txt

4. Solve the string oscillatory equation for v = T. Find the displacement after s seconds at m meters.

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/string\_equation\_solution.txt

5. The thermal expansion rate α is 1/k. The temperature change is T degrees.

 a. Find the extension of m meters rod due to the temperature change.

 b. Find the approximate volume change of m meters cubed cube due to the temperature change.

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/thermal4expansion.txt

n = 15108097

k = n Mod 10000

t = 10

L = 1

a = 1 / k

d = t \* L \* a

MsgBox d

6. There are two bodies in a thermodynamically isolated system: C1 m1 T1 and C2 m2 T2. Find the resulting temperature T. m1 = k, m2 = 2k. C1 = k/11, C2 = k/222, T1 = k/111, T2 = k/22

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/result4temperature.txt

n = 15108097

k = n Mod 10000

'

m1 = k

c1 = k / 11

t1 = k / 111

'

m2 = 2 \* k

c2 = k / 222

t2 = k / 22

'

t = (t1 \* c1 \* m1 + t2 \* c2 \* m2) / (m1 \* c1 + m2 \* c2)

MsgBox t

7. Solve the password and the number puzzles problems for your s.

 http://calculus17.weebly.com

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

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/distance\_between\_particles.txt

' For copper

Avogadro\_number = 6 \* 10 ^ 23

atomic\_weight = 0.064

density = 9000

distance\_between\_particles = (density \* Avogadro\_number / atomic\_weight) ^ (-1 / 3)

MsgBox distance\_between\_particles

9. Find the force between two charges of L and T Coulombs for the distance apart of m meters.

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/coulomb\_force.txt

10. Solve the simplified Maxwell Equations for c = 300000000-s. Find the intensity of electric field after s seconds at m meters.

 http://physics16.weebly.com/uploads/5/9/8/5/59854633/maxwell\_equations\_solution.txt

11. Improve your project.