1 individual physics task:

Edited at 10am 27.3.2017.

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. . e = s mod 8. m7 = s mod 7. m6 = s mod 6. m4 = s mod 4. m3 = s mod 3.

Errors:

1. Calculate the compound errors for x = s, dx = 1/T; y = T, dy = 1/k.

http://physics16.weebly.com/uploads/5/9/8/5/59854633/compound\_errors.txt

Projectile:

2. Find locations from which you can hit the roof of the net of soccer goal. The roof is 3 – 1/T meters wide. Initial velocity is T m/s.

Collisions:

3. Calculate the final speed after absolutely inelastic collision of two balls of masses L kg and T kg, moving with velocities s m/s and k m/s respectively.

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

5. Find acceleration of a mass at the inclined plane with A = T degrees and the friction coefficient μ = 1/T.

Games:

6. Solve polygonal areas problem for:

m4 = 0: 4

m4 = 1: 6

m4 = 2: 8

m4 = 3: 9

Plot polygon using this plotter:

http://www.shodor.org/interactivate/activities/SimplePlot/

http://physics16.weebly.com/uploads/5/9/8/5/59854633/4polygonalareaszimmermann.xlsx

http://physics16.weebly.com/uploads/5/9/8/5/59854633/6polygonalareaszimmermann.xlsx

http://physics16.weebly.com/uploads/5/9/8/5/59854633/8polygonalareaszimmermann.xlsx

http://physics16.weebly.com/uploads/5/9/8/5/59854633/9polygonalareaszimmermann.xlsx

7. Join Dota2 gaming competition.

http://www.dota2.com/international/overview/

Project:

8. Improve your project.

Write the proposal.

Deadline: 31.3.2017 Friday.