2 group physics task:

Edited at 2am 22.10.2017.

1. What is physics?

https://en.wikipedia.org/wiki/Physics

2. Why do we need physics?

https://en.wikipedia.org/wiki/Physics

3. Explain significant figures.

https://en.wikipedia.org/wiki/Significant\_figures

4. What are the Atlantic Rule and the Pacific Rule of calculating the number of significant figures?

5. How many significant figures are in this number 0.0000066750000?

6. Define accuracy and precision.

https://en.wikipedia.org/wiki/Accuracy\_and\_precision

7. What is a systematic error?

8. Show how to calculate compound error for the sum, difference, product and quotient.

9. How is bias related to accuracy?

10. Link kurtosis to precision. Link systematic error to accuracy.

11. Give the 7 base units.

12. What is kinematics?

13. Give the main equation for the kinematics in one dimension.

14. What is a vector?

15. Add, subtract and multiply the vectors (2, 8) and (3, -7).

16. Write the equations for the projectile motion in two dimensions.

17. Explain the projectile problem.

18. Find x and y for projectile with x0 = y0 = 0, v0 = 88 m/s, t = 88 seconds, A = 88 degrees.

Find maximum distance and maximum height.

19. Give equations of kinematics of rotation.

20. Find angular velocity and linear acceleration for v = 88 m/s and R = 89 meters.

21. What is the linear velocity in Indonesia due to the rotation of the Earth?

22. What are orbital, escape velocities and black hole?

23. What is geostationary orbit?

24. Explain Kepler Laws.

25. What is Archimedes Law?

26. What is Bernoulli Law?

27. Explain Magnus effect.

28. Explain the thermal expansion.

29. What is thermal balance?

30. Solve the simplified Maxwell Equations for c = 200000000.

Find the intensity of electric field after 88 seconds at 89 meters.

31. Find the force between two charges of 88 and 89 Coulombs for the distance apart of m meters.

32. Try to apply for USA citizenship.

https://www.dvlottery.state.gov/(S(ryg2hlfimnixem33etvdxxmd))/default.aspx

33. Try to apply for all grants, scholarships, fellowships, etc. in embassies of USA, Canada, Europe, Australia, Japan, etc.

Deadline: 31.10.2017.