

Algebra II

Welcome to our weekly class “reunion” #4.

I just can't stop being impressed with the high quality, meticulous Math work that most of you continuously submit week after week! However, extra special SHOUT OUTS go this week to Shloimy Shapiro, Chaim Asher Hershfang, Avrami Katz and Ephraim Borenstein.

You guys really know how to give a Math teacher “nachas.”

IMPORTANT REMINDERS:

1. When answering multiple choice questions, you must indicate in detail how you arrived at your answers.
2. Please remember, as per Common Core requirements, all alternate solutions are fully acceptable if properly and fully documented.
3. **Please make sure that each and every page submitted has**
 - a) **your full name**
 - b) **your class**
 - c) **the date of the assignment.**
4. We will be having our conference call, the same as previous weeks at 917-932-8638 from 4:15 - 4:35 PM. Looking forward to hearing from all of you.
5. **Work may be returned in via any of the following:**

Email mathi.mirrerr@gmail.com

Fax 718 375 6342

Mail Mirrer Mesivta High School 1791-5 Ocean Parkway Brooklyn NY 11223

Please indicate how you would like your work to be returned.

Keep up the great work!

Any questions, please call me any day between 4:00 - 10:00 PM at 718-404-8422.

This week's assignment:

August 2016 – problems 34 and 37

January 2017 – problem 5

NAME: _____

AUGUST 2016

34 One of the medical uses of Iodine-131 ($I-131$), a radioactive isotope of iodine, is to enhance x-ray images. The half-life of $I-131$ is approximately 8.02 days. A patient is injected with 20 milligrams of $I-131$. Determine, to the *nearest day*, the amount of time needed before the amount of $I-131$ in the patient's body is approximately 7 milligrams.

37 Seth's parents gave him \$5000 to invest for his 16th birthday. He is considering two investment options. Option *A* will pay him 4.5% interest compounded annually. Option *B* will pay him 4.6% compounded quarterly.

Write a function of option *A* and option *B* that calculates the value of each account after n years.

Seth plans to use the money after he graduates from college in 6 years. Determine how much more money option *B* will earn than option *A* to the *nearest cent*.

Algebraically determine, to the *nearest tenth of a year*, how long it would take for option *B* to double Seth's initial investment.

NAME _____

JANUARY 2017

2 A rabbit population doubles every 4 weeks. There are currently five rabbits in a restricted area. If t represents the time, in weeks, and $P(t)$ is the population of rabbits with respect to time, about how many rabbits will there be in 98 days?

(1) 56

(3) 3688

(2) 152

(4) 81,920