HW 9-3 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Secondary III Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_

Solve the following equations graphically

1.  2.  3. 

Solve the following equations algebraically

4.  5. 

6.  7. 

8.  9. 

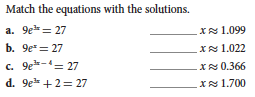
10. 

11. The price *P* of a gallon of gas after *t* years is given by the equation *P* **=** *P0* ( 1 **+** *r* )twhere *P0* is the initial price of gas and *r* is the rate of inflation. If the price of a gallon of gas is currently $3.25, how long will it take for the price to rise to $4.00 if the rate of inflation is 10.5%?

12. A veterinarian has instructed Harrison to give his dog one 325-mg aspirin

tablet for arthritis. The amount of aspirin, A, remaining in the dog’s body after t minutes can be expressed by . How long will it take for the amount of aspirin to drop to 50-mg?

13.How long will it take for a $150 initial investment in an account that pays 3.8% compounded continuously to grow to $1,500?

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14.

0.341

**Review**

1. The population of Smallville in the year 1890 was 6,250. Assume the population increased at a rate of 2.75% per year.
2. Find the population in 1915.
3. Find the population in 1940.

**Selected Answers:**

2. x=0.47

4. x=3.36

6. x=-0.16

8. x=4.40

10. x=-5, 4

12. 2.08 years

10. 20 times more severe

11. x=1.0999 B

x=0.341 D

x=0.366 A

x=1.700 C