Half-life = the time required for ½ of the mass of a substance to decay.

Time	mass
0	original mass 100.0g
2	50.0g
4	25.0g
6	12.5g
8	6.25g
10	3.125g

Ex. if the half life of Cartman is 2 days. If we have 100.0g to start, how many grams would be remaining after 10 days?

hours	
0	200.0g
6	100.0g
12	50.0g
18	25.0g
24	12.5g
30	6.25g

If the half-life of Cardium is 6 hours. If you begin with 200.0g and end with 6.25g how many hours did this take?

Week	mass
0	500.0g
1	250.0g
2	125.0g
3	62.5g
4	31.25g
5	15.625
6	7.8125
	7.813g

If Sunnium has a half life of 7 days, and we begin with 500.0g how much will be left in 6 weeks?

5/6/16

Solutions:

Solution – homogeneous mixture of two or more substances in a single physical state

Solute – what is being dissolved (smaller quantity)

Solvent – substance that does the dissolving (most common is water)

aqueous – solution that has water as its solvent (aq)

tincture – solution that has alcohol as its solvent

amalgams – alloy that contains mercury (old dental fillings)

alloy – a solid solution of two or metals

electrolytes – aqueous solution that has dissolved ions – which result in the ability to carry an electrical charge

miscible – Substance can dissolve in the solvent

immiscible – Substance can <u>not</u> dissolve in the solvent

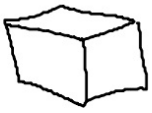
Stability – solute stays dissolved

equilibrium – amount of solute leaving soln. = amt of solute dissolving

How can we control dissolving:

1. Temperature – Solids + liquids - increase temp
   gases - lower temp.

2. Stirring - constant motion evens out the concentration

3. Surface area –  more surface area - quicker dissolving

4. Pressure – increase pressure forces mixing