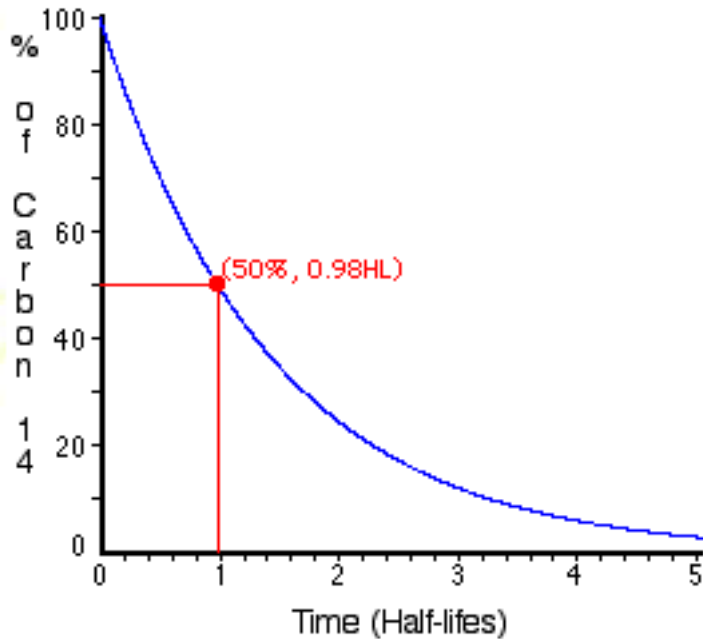


# DEEP TIME: RADIOACTIVE DECAY



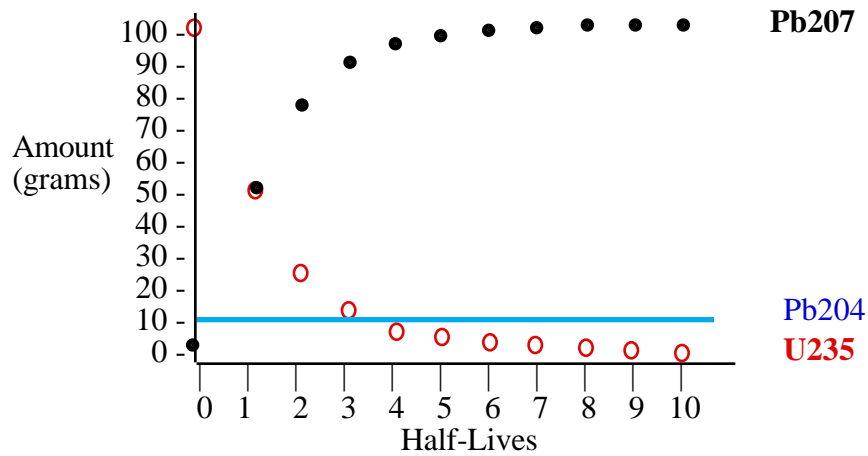
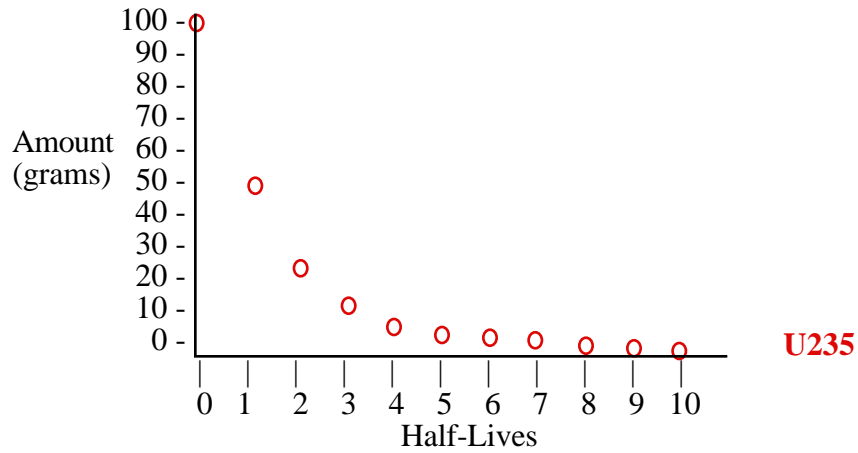
## Uranium 235 - Lead 207 Decay.....

TIME	U 235 --->	Pb 207	Pb 204
crystallized	100 g	0 g	10 g
1 half-life	50 g	50 g	10 g
2 half-lives	25 g	75 g	10 g
3 half-lives	12.5	87.5 g	10 g

## Rubidium 87 - Strontium 87 Decay....

TIME	Rb 87 --->	Sr 87	Sr 86
crystallized	8 g	0 g	3 g
1 half-life	4 g	4 g	3 g
2 half-lives	2 g	6 g	3 g
3 half-lives	1 g	7 g	3 g

# DEEP TIME Worksheet item # 10



## Isochrons for Rubidium-Strontium Isotopes

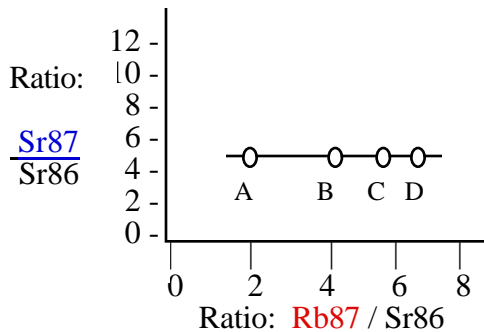


Fig. 1. Rubidium - strontium ratios in four different minerals (A,B,C,D), plotted as they might appear in a newly formed rock. The line through the four plots is the isochron. Figures adapted from Miller, 1999

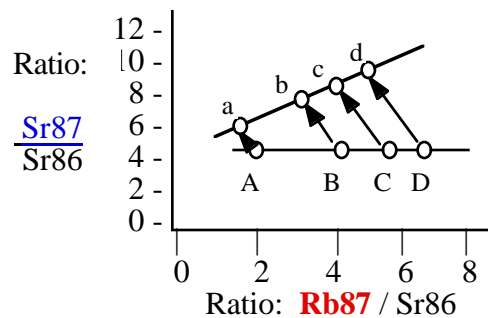


Fig. 2. Rubidium - strontium ratios as time passes. The plots of the four minerals shift upwards and to the left, proportional to their original amounts. The sloping angle of the resulting alignment a,b,c,d (isochron) can be used to calculate the age of the sample.