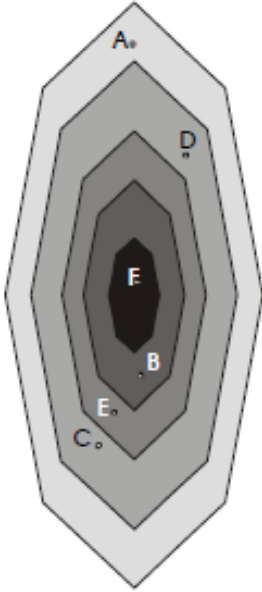


Zircon Dating Challenge

A zircon crystal has been collected from an igneous rock found in outback Australia. You have been asked to calculate an average age for the zircon.

Using a probe, you sample the zircon in six different places (A-F). You also notice that the crystal appears to have zones or layers inside.



Your probe measures the amount of remaining U^{235} in a sample. This atom radioactivity decays to form Pb^{207} .

You have recorded the percent of U^{235} you find for each of the six places in a table shown below.

Sample	% of ^{235}U	AGE
A	96	
B	65	
C	91	
D	92	
E	85	
F	35	

Use the decay curve to calculate the ages of each sample and complete the table.

Which part of this zircon crystal is the oldest? _____

Which part of this zircon crystal is the youngest? _____

What does this tell you about how this crystal has formed _____

What is the difference in time between the core and the next layer? _____

What is the average age of this zircon crystal? _____

(This is reworking of an activity developed by me for GSA)

Radioactive decay curve for Uranium-235

