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INSTRUCTOR

Joel DeWitt

East Carolina University

Chapter 30 (Homework)

Current Score

QUESTION

1

2

3

4

5

6

POINTS

0/2

1/1

-1

1/1

-1

0/1

**TOTAL SCORE**

2/7

28.6%

Due Date

THU, NOV 12, 2020

11:59 PM EST

[Request Extension](#) **Description**

Assignment Submission & Scoring

Assignment Submission

For this assignment, you submit answers by question parts. The

number of submissions remaining for each question part only changes if you submit or change the answer.

Assignment Scoring

Your last submission is used for your score.

1. [0/2 Points]

DETAILS

PREVIOUS ANSWERS

COLFUNPHYS1 30.P.008.

MY NOTES

ASK YOUR TEACHER

PRACTICE ANOTHER

Find the binding energy and the binding energy per nucleon of the $^{207}_{82}\text{Pb}$ nucleus.

binding energy ✖

binding energy per nucleon ✖

2. [1/1 Points]

DETAILS

PREVIOUS ANSWERS

COLFUNPHYS1 30.P.010.

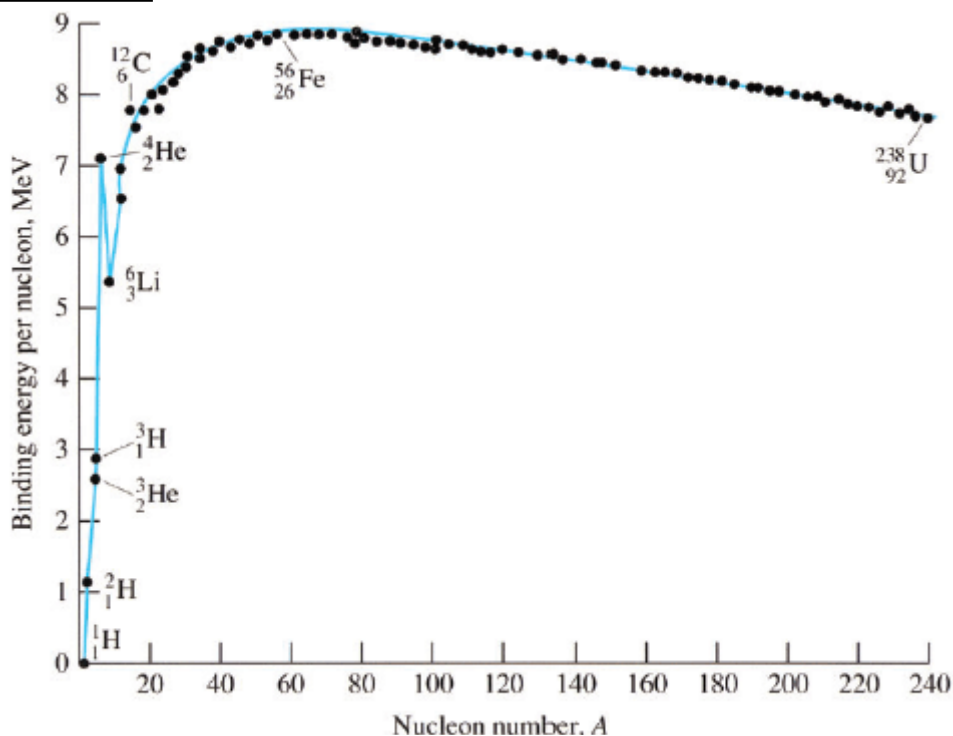
MY NOTES

ASK YOUR TEACHER

PRACTICE ANOTHER

Use the binding energy per nucleon curve in the figure above to determine how much energy must be supplied to separate the nucleons in a $^{80}_{35}\text{Br}$ nucleus.

✔



3. [-/1 Points]

DETAILS

COLFUNPHYS1 30.P.027.

MY NOTES

ASK YOUR TEACHER

PRACTICE ANOTHER

A Geiger counter reading of a radioactive sample is initially 6320 counts per minute. The same sample gives a reading of 462 counts per minute 10.8 h later. What is the sample's half-life?

4. [1/1 Points]

DETAILS

PREVIOUS ANSWERS

COLFUNPHYS1 30.P.028.

MY NOTES

ASK YOUR TEACHER

PRACTICE ANOTHER

If a rock containing U-238 initially reads 84.4 counts per minute on a Geiger counter, what will its reading be 8 weeks later?



counts per minute

5. [-/1 Points]

DETAILS

COLFUNPHYS1 30.P.030.

MY NOTES

ASK YOUR TEACHER

PRACTICE ANOTHER

Find the activity of a sample containing 3.43×10^{14} iodine-131 nuclei ($T_{1/2} = 8.0$ days).

6. [0/1 Points]

DETAILS

PREVIOUS ANSWERS

COLFUNPHYS1 30.P.031.

MY NOTES

ASK YOUR TEACHER

PRACTICE ANOTHER

Find the activity of a sample containing 8.99×10^{-6} g of ^{60}Co ($T_{1/2} = 5.27$ years).

Find the activity of a sample containing 3.33×10^{27} ($t_{1/2} = 5.27$ years).

3.44E8 per n 

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