Concept questions

Discussion Week 4

What is the average number of neutrons produced in the fission of 235 U, $\overline{\nu}$?

a) 1.95 c) 2.13

b) 2.44 d) 2.75

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Which of the following nuclides are fissile?

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a) <sup>235</sup>U, <sup>238</sup>Pu, <sup>239</sup>Pu,
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b) ²³⁸U, ²³⁸Pu, ²⁴²Pu

c) ²³³U, ²³⁵U, ²³⁹Pu, ²⁴²Pu

d) ²³³U, ²³⁵U, ²³⁹Pu

Which of the following nuclides are fissile?

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a) 235U, 238Pu, 239Pu,
b) 238U, 238Pu, 242Pu
c) 233U, 235U, 239Pu, 242Pu
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²³³U, ²³⁵U, ²³⁹Pu

d)

What is the functional relationship between σ_a and v?

a)	$\frac{1}{E^2}$	c)	$\frac{1}{E}$
b)	$\frac{1}{v}$	d)	$\frac{1}{\sqrt{v}}$

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a)
$$\frac{1}{E^2}$$
 c) $\frac{1}{E}$ b) $\frac{1}{v}$ d) $\frac{1}{\sqrt{v}}$