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

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

Which of the following nuclides are fissile?

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

b) ²³⁸U, ²³⁸Pu, ²⁴²Pu

c) ²³³U, ²³⁵U, ²³⁹Pu, ²⁴²Pu

d) ²³³U, ²³⁵U, ²³⁹Pu

Which of the following nuclides are fissile?

```
<sup>235</sup>U, <sup>238</sup>Pu, <sup>239</sup>Pu,
a)
                <sup>238</sup>U, <sup>238</sup>Pu, <sup>242</sup>Pu
b)
                <sup>233</sup>U, <sup>235</sup>U, <sup>239</sup>Pu, <sup>242</sup>Pu
C)
                <sup>233</sup>U, <sup>235</sup>U, <sup>239</sup>Pu
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)	$\frac{1}{\sqrt{v}}$

What is the functional relationship between σ_a and v?

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