class 21: Post-main-sequence evolution, degeneracy, white dwarfs

Why are nuclear reaction rates so high in the hydrogen shell surrounding the inert helium core on the red giant branch?

Why does a star's luminosity steadily increase on the red giant branch?

Why is degeneracy pressure inversely proportional to (some power of) the particle mass (what's the physics, not just math)?
class 22: degeneracy, white dwarfs, neutron stars

Why do more massive white dwarfs have smaller radii (physically; qualitatively)? Why is the opposite true for stars supported by gas pressure?

Why are neutron stars smaller than white dwarfs?