

Extra Credit (optional)

1. According to Page, how should the entanglement entropy of Hawking radiation behave during the process of black hole evaporation? How is this different from Hawking's prediction?
2. How does Hawking's prediction that late stage radiation modes just outside the event horizon are maximally entangled with interior modes just inside the event horizon conflict with Page's prediction that late stage radiation modes are maximally entangled with early stage radiation modes?
3. How does the prediction of a "firewall" just inside the event horizon of a black hole resolve the conflict referred to in question #2?
4. Some physicists think the RT formula from the AdS/CFT correspondence can be used to resolve the conflict between Hawking's prediction of information loss during black hole evaporation, and Page's prediction of no information loss. Which prediction does the RT formula support?