Homework 7, Your Name.

Problem #1 (Make sure to use R when appropriate for carrying out the calculations, showing your work)

~~**5.30**~~

~~**5.31**~~

~~**5.39**~~

~~**5.48**~~

~~**5.50**~~

~~**5.57 (No need to provide the tree diagram in (a), just calculate the probabilities of intersections)**~~

~~**5.62**~~

~~**6.5**~~

~~**6.12 (No need to sketch the tree)**~~

Problem #2 (+ 2 bonus pts)

For an arbitrary **discrete** random variable:

1. ~~Using formula from definition of $E[X]$ (slide #9), derive the form of $E[aX + b]$ as a function of a, b and $E[X]$.~~
2. ~~Using formula from definition of $V[X]$ (slide #11) and result from part 1, derive the form of $V[aX + b]$ as a function of a, b and $V[X]$.~~