**Biology 3201 – In-class Assignment (Sex-Linked Problems)**

1. A normal female who is not a carrier for color-blindness marries a color-blind male. What could the daughter’s phenotype(s) be?
2. A female with muscular dystrophy married a male who also has the syndrome. If they had sons, what percentage of them would have muscular dystrophy?
3. In a cross between a purebred, red-eyed female *Drosophila* fruit fly and a white-eyed male, what percentage of the male offspring will have white eyes?
4. If a man and a woman, both with normal vision, have a colorblind son, draw the Punnet Square that illustrates this. If the man dies and the woman remarries (a colorblind man), draw a Punnett square showing the type(s) of children that could be expected from this marriage.
5. Parents had a boy and girl offspring, neither of which has haemophilia. One of the parents has haemophilia. Illustrate a cross that shows this result.
6. Hypophosphatemic vitamin d-resistant rickets (HPDR) is an X-linked dominant form of rickets that differs from most cases of rickets in that ingestion of vitamin D is relatively ineffective. A woman heterozygous for the trait has children with a man who does not have the disorder. Which percentage of their children will be affected?