Set 5, Due: March 24, 2020

1. Suppose that $x(t), y(t)$ satisfy
$$x'' + Px = 0$$
$$y'' + Qy = 0$$
and $x(0) = y(0) = 0$, $x'(0) = y'(0) > 0$. If $P(t) \leq Q(t)$, show $x(t) \geq y(t)$.

2. Prove the second Bianchi identity.

3. p.313: 10-1

4. p.314: 10-6 (you can use the results mentioned in "Hint")

5. p.314: 10-7