## Differential Equations Seminar: Week 11 Solutions

1. Use $V(x, y)=3 x^{2}+5 y^{2}$ to find the origin is asymptotically stable.
2. Use $V(x, y)=2 x^{2}+y^{4}$ to find the origin is asymptotically stable.
3. Use $V(x, y)=2 x^{2}+y^{2}$ to find the origin is asymptotically stable.
4. Use $V(x, y)=4 x^{2}+y^{2}$ to find the origin is stable.
