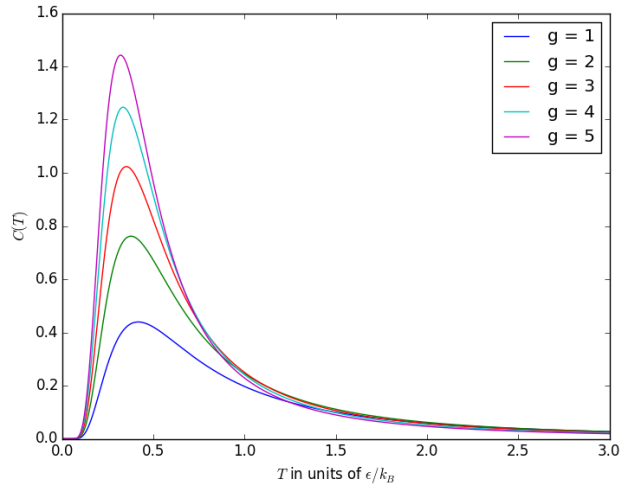**4(c)**

Figure 1: This is the plot obtained when $C(T)$ is plotted against T, where $C(T)$ is in units of k_B.
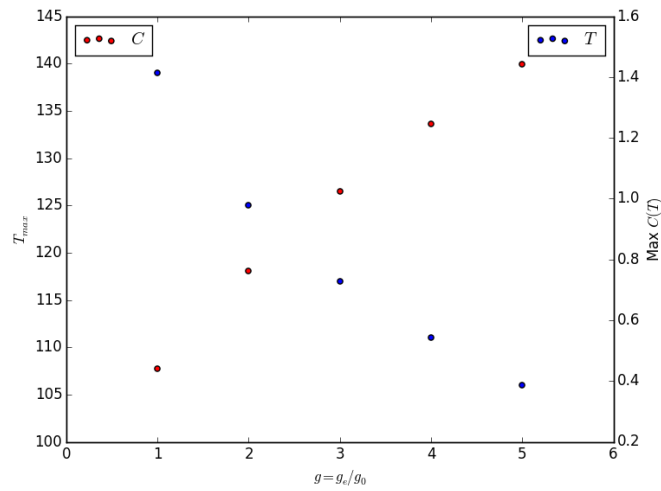
(d)

Figure 2: A plot of $C(T_{max})$ vs $g = g_e/g_0$ in red and T_{max} vs g in blue.
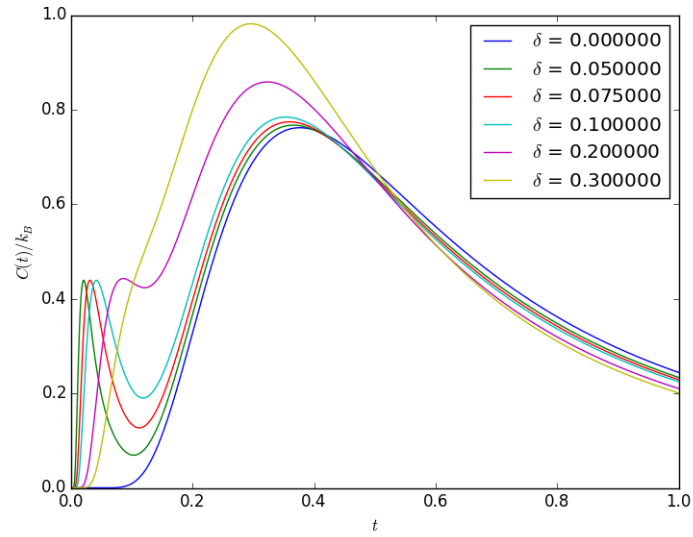
5(e)

Figure 3: A plot of $C(T_{max})$ vs $g = g_e/g_0$ in red and T_{max} vs g in blue.