MATH 202.7 (Term 141)
Quiz 5 (Sects. 6.2 & 6.3) **Duration: 30min**

Name: **ID number:**

1.)(a.3pts, b.4pts) Consider the DE $(x-2)y'' - xy' - y = 0$.
a.)Explain why the DE has 2 powers series solutions in the form $y = \sum_{n=0}^{\infty} c_n(x-1)^n$, **which converges for** $0 < x - 1 < R$. **Find a value of** R.
b.)Find 2 powers series solutions of the DE in the form $y = \sum_{n=0}^{\infty} c_n x^n$, $0 < x < 2$.
2.)(3pts)Find the indicial roots of the DE $x^2y'' + x(x+1)y' - y = 0$ **at** $x_0 = 0$.
