1. [5pts] Classify as regular or irregular each singular point of the DE

\[ x^3 (x^2 - 1) (x - 2)^2 y'' + 4x (x - 2) y' - (x - 1) y = 0 \]

2. [5pts] Find the indicial equation and the indicial roots of the DE

\[ 3xy'' + (2 - x) y' - y = 0 \]

\((x = 0)\) is a regular singular point for this DE\)