MATH 202.18 (Term 102)
Quiz 4 (Chap. 6.1-6.2)  Duration: 20mn

Name:  

1. (3pts) What are the indicial roots at the singular point \( x = 0 \) of the DE

\[
x^2 y'' + 3x \cos xy' + \sin xy = 0,
\]

knowing that \( \cos x = 1 - \frac{1}{2} x^2 + \ldots \) and \( \sin x = x - \frac{1}{6} x^3 + \ldots \)?

2. (7pts) Find \( c_1, c_2 \) and \( c_3 \) of the solution \( y = \sum_{n=0}^{\infty} c_n x^{n+\frac{3}{2}} \) to the DE

\[
x^2 y'' + xy' - \frac{9}{4} (x + 1)y = 0.
\]