QUIZ 6 - MATH 152   Friday, October 20

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Read each problem **very carefully** before starting to solve it and do only what is asked.
Each problem is worth around 5 points. It is necessary to show **all** your work. Correct
answers without explanations are worth 0 points. GOOD LUCK!!

1. [6 points] Write down an expression for the Taylor polynomial $T_4(x)$ of $f(x) = x \ln x$ at $a = 1$.
   (Please, show all steps.)

2. [6 points] Solve the initial value problem

$$\sqrt{1 - x^2}\, y' = xy, \quad y(1) = 7, \quad y > 0.$$