

MATH 215 HW # 2

DO THE FOLLOWING PROBLEMS FROM THE ONLINE BOOK, FOR THE QUESTION THAT ASK FOR A SOLUTION TO A DE, FIND THE INTERVAL OF VALUES OF THE INDEPENDENT VARIABLE ON WHICH THE SOLUTION IS DEFINED.

- 1) EXERCISE 1.1.4
- 2) EXERCISE 1.1.6
- 3) EXERCISE 1.1.105
- 4) EXERCISE 1.2.1
- 5) EXERCISE 1.2.5
- 6) EXERCISE 1.3.5
- 7) EXERCISE 1.3.8

ALSO DO THE ADDITIONAL PROBLEMS:

- 8) SOLVE $y' = (1-2x)y^2$, WITH $y(0) = -1/6$. ON WHICH INTERVAL IN x IS THE SOLUTION DEFINED?
- 9) SOLVE $y' = \frac{xy^3}{\sqrt{1+x^2}}$, WITH $y(0) = 1$. ON WHICH INTERVAL IN x IS THE SOLUTION DEFINED?
- 10) SOLVE $y' = \frac{2x}{1+2y}$, $y(2) = 0$. ON WHICH INTERVAL IN x IS THE SOLUTION DEFINED.