

## Worksheet 6

10/9/2023

1. Solve the differential equation  $xy' = (y^2 + 1)(x^2 + 1)$  with the initial condition  $y(1) = 1$ .

2. Solve the differential equation  $y' = xy + 1$ .

3. Solve the differential equation  $x^2y' + xy = 1$  with the initial condition  $y(1) = 2$ .