Find the general solution to the following first-degree first-order ODEs (2 pts each)

1. 
   \[ 2xy' + y^2 - x^2 = 0 \]

2. 
   \[ y' = \frac{e^y}{xy^2 e^y + 1} \]

3. 
   \[ x^{3/2} y' + \frac{1}{2} \sqrt{xy} - \ln y = \frac{1}{2} \ln x \]

4. 
   \[ (x^2 + y^2)y' = xy \]

5. 
   \[ y' = -\frac{3x^2 e^y + y^2}{x^3 e^y + 2xy} \]