Homework/ First order ordinary differential equations

Solve the following first order differential equations:

1- $-ydx + \left(x + \sqrt{xy}\right)dy = 0$

2- $2x + x\,e^{xy}\mathrm{y}' + ye^{xy} = -2y\mathrm{y}'$

3- $[e^x \cos(y) + (1-x)\sin(y)]\frac{dy}{dx} + e^x(1+\sin(y)) + \cos(y) = 0$

4- $(2xy + 3y^2)dx - (x^2 + 2xy)dy = 0$

5- $\mathrm{y}' = \frac{sec^2(y)}{1+x^2}$

6- $\left[sin(x) + tan^{-1}\left(\frac{y}{x}\right)\right]\frac{dx}{dy} = y - ln\sqrt{x^2+y^2}$

7- $2ydx - \left(x - yx^3cos(y)\right)dy = 0$

8- $(ye^{xy})dx + \left(xe^{xy} + sin(y)\right)dy = 0$; y (0)=π

9- $3x\bar{y} - y = \ln(x) + 1$

10- $y\frac{dx}{dy} - x = 2y^2$; y (1)=5

11- $2x^2y^2\bar{y} + 1 = \mathrm{y}$