

**Exercise 9.3.1**

Show that by making a change of variables to  $\xi = c^{1/2}x - c^{-1/2}by$ ,  $\eta = c^{-1/2}y$ , the operator  $\mathcal{L}$  of Eq. (9.18) can be brought to the form

$$\mathcal{L} = (ac - b^2) \frac{\partial^2}{\partial \xi^2} + \frac{\partial^2}{\partial \eta^2}.$$