

Since $P(x)$ is the derivative of the coefficient of y' [$P(x) = 1$ and the coefficient is x], we can write the differential equation $xy' + y = 7\sqrt{x}$ in the easily integrable form $(xy)' = 7\sqrt{x} \Rightarrow xy = \frac{14}{3}x^{3/2} + C \Rightarrow y = \frac{14}{3}\sqrt{x} + C/x$.