Consider the equation:

$$1 + (y')^2 - 2y''(1 - y) = 0 \tag{1}$$

The solution for $y(x)$ is of the form:

$$y(x) = a_0 + \sum_i a_i x^i$$

Boundary condition $y(0) = 1$, so

$$a_0 = 1$$

This makes our solution:

$$y(x) = 1 + \sum_i a_i x^i$$

Substitute into the original equation:

$$1 + (y')^2 - 2y''(1 - y) = 0$$
$$1 + (y')^2 - 2y''\left(1 - a_0 + \sum_i a_i x^i\right) = 0$$

Since $a_0 = 1$, this reduces to:

$$1 + (y')^2 - 2y''\left(\sum_i a_i x^i\right) = 0$$

Let us call the terms:

$$(1 + (y')^2) \quad \text{Term 1}, \qquad -2y''\left(\sum_i a_i x^i\right) \quad \text{Term 2}$$

The coefficient-matching equation for x^0 will only get contribution from **Term 1**.

Now, for the coefficients:

$$1 + \text{coeff}_{x^0}\left[(y')^2\right] = 0$$

Calculate y' and y'':

$$y' = \sum_i i a_i x^{i-1}$$

So, $\text{coeff}_{x^0}\left[(y')^2\right]$ comes from a_1^2.
Thus,

$$1 + a_1^2 = 0 \implies a_1 = \pm i$$