MA 262 - Quiz 1 (Lesson 1)

1. Find all m such that the function $\varphi(x) = x^m$ is a solution to the equation

$$2x^2 \frac{\mathrm{d}^2 y}{(\mathrm{d}x)^2} - 3x \frac{\mathrm{d}y}{\mathrm{d}x} + 2y = 0 \ .$$