Answer on question #77918 – Math – Differential Equations

<u>Question</u>

Find the value of m so that the function $y = e^{mx}$ is a solution of the differential equation
$y' + 2y = 0$.

$$a = 0; \quad b = 3; \quad c = 1; \quad d = 2.$$

<u>Solution</u>

Find the derivation of the given function:

$$y' = me^{mx}.$$

Under the statement of the problem the function satisfies the differential equation so we have:

$$me^{mx} + 2e^{mx} = 0;$$

$$e^{mx}(m + 2) = 0;$$

$$m = -2.$$

P.S. There is no right answer among the suggested ones. Supposing that minus has been lost, the most close to the right answer is d.