

MS-A0111 - Differential and Integral Calculus 1, 07.09.2020-21.10.2020

Started on	Sunday, 4 June 2023, 11:59 AM
State	Finished
Completed on	Sunday, 4 June 2023, 12:03 PM
Time taken	3 mins 19 secs
Grade	0.00 out of 3.00 (0%)

Question 1

Flag question

Mark 0.00 out of 1.00

Incorrect

Solve  $y'' + 2y' + y = x + 1$ . (No need to use higher maths here!)

- Select one or more:
- ☐ a.  $x^2 + x + c_2e^{-x}x + c_1e^{-x} - 1$
- ☒ b.  $x + c_2e^{-x}x + c_1e^{-x^2} - 1$  What?
- ☐ c.  $x + c_2e^{-x}x + c_1e^{-x} - 1$

Your answer is incorrect.

The correct answer is:  $x + c_2e^{-x}x + c_1e^{-x} - 1$

Question 2

Flag question

Mark 0.00 out of 1.00

Incorrect

Consider  $y''(x) + 4y'(x) + 4y(x) = e^{-2x}$ . What is the form of the solution?

- Select one or more:
- ☐ a.  $Kxe^{-2x}$
- ☒ b.  $Ke^{-2x}$  But that is the solution of the homogeneous problem?
- ☐ c.  $Kx^2e^{-2x}$

Your answer is incorrect.

The correct answer is:  $Kx^2e^{-2x}$

Question 3

Flag question

Mark 0.00 out of 1.00

Incorrect

Consider  $y'' + 16y = \cos 4t$ . What is the model of the solution? Is resonance possible?

- Select one or more:
- ☐ a.  $A \sin 4t$ , yes.
- ☐ b.  $At \sin 4t + Bt \cos 4t$ , yes.
- ☒ c.  $A \sin 4t + B \cos 4t$ , yes. But where is that promised resonance?

Your answer is incorrect.

The correct answer is:  $At \sin 4t + Bt \cos 4t$ , yes.

Finish review



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