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1. (1 point) Find the general solution to  $6x^2y'' + 24xy' - 24y = 0$ .

Enter your answer as  $y = \dots$ . In your answer, use  $c_1$  and  $c_2$  to denote arbitrary constants and  $x$  the independent variable. Enter  $c_1$  as c1 and  $c_2$  as c2.

\_\_\_\_\_ help (equations)

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2. (1 point) Find the general solution to  $x^2y'' + 11xy' + 25y = 0$ .

Enter your answer as  $y = \dots$ . In your answer, use  $c_1$  and  $c_2$  to denote arbitrary constants and  $x$  the independent variable. Enter  $c_1$  as c1 and  $c_2$  as c2 (and use absolute values for  $\ln$  if necessary).

\_\_\_\_\_ help (equations)

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3. (1 point)

Find the general solution to  $x^2y'' + 5xy' - 2y = 0$ .

- A.  $y = c_1e^{-4x} + c_2e^{-x}$
- B.  $y = c_1x^{-4} + c_2x^{-1}$
- C.  $y = c_1x^{(-2-\sqrt{6})} + c_2x^{(-2+\sqrt{6})}$
- D.  $y = c_1x^{(-2-\sqrt{6})} + c_2x^{(-2-\sqrt{6})} \ln|x|$