Given:
\[ y'' + y' - 6y = 0 \]  
Claim: \( \phi_1 = e^{-3x} \) and \( \phi_2 = 5e^{2x} \) are solns.

Verify:
\[
\begin{align*}
\phi_1(x) &= e^{-3x} \\
\phi_1'(x) &= -3e^{-3x} \\
\phi_1''(x) &= 9e^{-3x}
\end{align*}
\]
\[
\phi_1'' + \phi_1' - 6\phi_1
= 9e^{-3x} + (-3)e^{-3x} - 6(e^{-3x})
= (9 - 3 - 6)e^{-3x}
= 0 e^{-3x} = 0
\]

Verify 2:
\[
\begin{align*}
\phi_2 &= 5e^{2x} \quad \phi_2' = 10e^{2x} \quad \phi_2'' = 20e^{2x} \\
\phi_2'' + \phi_2' - 6\phi_2
&= (20 + 10 - 6.5)e^{2x} = 0
\end{align*}
\]

Let \( \phi_3(x) = 2\phi_1(x) - 3\phi_2(x) \)
\[
= 2e^{-3x} - 15e^{2x}
\]
Claim: \( \phi_3(x) \) is also a soln. to (*)

Cont.
\[ \phi_3(x) = 2e^{-3x} - 15e^{2x} \]
\[ \phi_3'(x) = -6e^{-3x} - 30e^{2x} \]
\[ \phi_3''(x) = 18e^{-3x} - 60e^{2x} \]

\[ \phi_3'' + \phi_3 - 6\phi_3 = 18e^{-3x} - 60e^{2x} + \left( -6e^{-3x} - 30e^{2x} \right) \]
\[ - 6 \left( 2e^{-3x} - 15e^{2x} \right) \]
\[ = 18e^{-3x} - 6e^{-3x} - 12e^{-3x} - 60e^{2x} - 30e^{2x} + 90e^{2x} \]
\[ = \left( 18 - 6 - 12 \right)e^{-3x} + \left( -60 - 30 + 90 \right)e^{2x} \]
\[ = 0 \]

So \( \phi_3(x) = 2e^{-3x} - 15e^{2x} \) is also a solution to (*)

I.e. \( \phi_3(x) = 2\phi_1(x) - 3\phi_2(x) \) is a solution to (*)

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**Payment Policy**

Contact lens examination fees must be paid in full on the day of the exam, and full payment for your contact lenses must be made on the day that you receive your contact lenses. If you need "special order" contact lenses, those that are not normally kept in stock (such as tinted, toric, or gas permeable lenses, etc.) a 50% deposit is required before the order can be placed.

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**Refund Policy**

If during your first 45 days of trying contact lenses, you or your eye doctor determine that you are unable to wear contact lenses, we will refund you the amount that you paid for the lenses. To be eligible for a refund:

- You must pick up your contact lenses no later than 30 days from the time of your order.
- You must return the undamaged contact lenses within 45 days from the date you received them.
- No refund will be given for disposable contact lenses unless the boxes are returned unopened, unmarked and undamaged.
- No refund will be given for contact lens professional fees.