Isključivo pomoću Laplaceovih transformata riješite sljedeće Cauchyjeve probleme:

1. $\begin{cases} y'' + y = 4 \cdot \cos t, \\ y(0) = y'(0) = 0. \end{cases}$

2. $\begin{cases} y'' + y = 2 \cdot \sin x, \\ y(0) = 0, \\ y'(0) = -1. \end{cases}$

3. $\begin{cases} y'' - 2 \cdot y + 3 \cdot \sin t = 0 \\ y(0) = 0, \\ y'(0) = 1. \end{cases}$

4. $\begin{cases} y'' - y' + y = 2 \cdot \sin x, \\ y(0) = 2, \\ y'(0) = 0. \end{cases}$

5. $\begin{cases} y'' - y = 2 \cdot e^{x}, \\ y(0) = 1, \\ y'(0) = 2. \end{cases}$

6. $\begin{cases} y'' + 2 \cdot y = 5 \cdot \sin x, \\ y(0) = 0, \\ y'(0) = 5. \end{cases}$

7. $\begin{cases} y'' + 2 \cdot y = 6 \cdot \cos x, \\ y(0) = 6, \\ y'(0) = 0. \end{cases}$

8. $\begin{cases} y'' - 3 \cdot y' + 2 \cdot y = e^{2 \cdot x}, \\ y(0) = 0, \\ y'(0) = 1. \end{cases}$

9. $\begin{cases} y'' - 2 \cdot y' + y = 2 \cdot e^{x}, \\ y(0) = y'(0) = 0. \end{cases}$

10. $\begin{cases} y'' + 4 \cdot y' + 4 \cdot y = 2 \cdot e^{-2 \cdot x}, \\ y(0) = y'(0) = 0. \end{cases}$