

## Curs06 - Rezolvare

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$$x''' = 24t$$

$$x(0) = 1, x'(0) = -1, x''(0) = 2$$

$$\underline{\underline{\text{Um 2}}} \quad x'' = \int x''' dt = \int 24t dt = 12t^2 + C_1$$

$$x' = \int x'' dt = \int (12t^2 + C_1) dt = 4t^3 + C_1 t + C_2$$

$$x = \int x' dt = \int (4t^3 + C_1 t + C_2) dt = t^4 + C_1 \frac{t^2}{2} + C_2 t + C_3$$

$$x(0) = 1 \Rightarrow C_3 = 1$$

$$x'(0) = -1 \Rightarrow C_2 = -1$$

$$x''(0) = 2 \Rightarrow C_1 = -2$$

$$x_{PC} = t^4 - 2 \cdot \frac{t^2}{2} - 1 \cdot t + 1$$

$$= t^4 - t^2 - t + 1$$