

Solving Initial Value Problems with Laplace Transforms- HW Problems

In problems 1-5 solve the initial value problem using Laplace transforms.

1. $y' - 4y = 0;$ $y(0) = 3$

2. $y'' + 9y = 0;$ $y(0) = 3, \quad y'(0) = 6$

3. $x'' + 2x' - 3x = 0;$ $x(0) = 5, \quad x'(0) = -3$

4. $x'' + 9x = \sin(2t);$ $x(0) = x'(0) = 0$

5. $x'' + 6x' + 8x = 8;$ $x(0) = x'(0) = 0.$