

M1B/Schoenbrun Linear Differential Equations

Solve the differential equations with the stated conditions:

1) $y'' + 5y' + 4y = 0$ where $y(0) = -1$ and $y'(0) = 1$

2) $y'' + 2y' + y = 0$ where a) $y(0) = 1$ and $y'(0) = 0$
and b) $y(0) = -1$ and $y'(0) = -1$

3) $y'' + 4y' + 5y = 0$ where a) $y(0) = \frac{1}{2}$ and $y'(0) = 1$
and b) $y(0) = -1$ and $y'(0) = -3$