PROBLEM SET #6 (PART TWO)

For each given homogeneous linear differential equation $L(y)=0$ with constant coefficients

(a) write down the characteristic polynomial $P(\lambda)$ for L.

(b) find the roots of the characteristic equation $P(\lambda)=0$

(c) write down the general solution of $L(y)=0$

(d) solve the given initial value problem $L(y)=0$, $y(0)=b_0$, $y'(0)=b_1$

④ $y''+0y'+16y=0$, $y(0)=12$, $y'(0)=14$

⑤ $y''-8y'+20y=0$, $y(0)=6$, $y'(0)=30$

ALL NUMBERS MUST BE EXACT; DO NOT USE DECIMALS