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HW #2

(1) Solve for $x(t)$, assuming all IC's are 0

$$\frac{d^2 x}{dt^2} + 10 \frac{dx}{dt} + 21x = 8u(t)$$

(2) Find the Inverse Laplace Transform of:

a) $$\frac{2s}{(s+3)(s+7)}$$

b) $$\frac{2s}{(s+3)(s+7)(s+10)}$$

c) $$\frac{2s}{s^2 + 10s + 50}$$

d) solve $$\frac{dx}{dt} + 7x = 5\cos 2t$$

for $x(t)$, assuming IC's are 0.