SUPPLEMENTAL HW 14

1 & 2)

$n = 142 = DP$

SO MOST CHAINS HAVE 142 MONOMER UNITS

MONOMER WEIGHT OF MONOMER = $28 \frac{g}{mol}$

$142 \cdot 28 \frac{g}{mol} = \boxed{3,976 \frac{g}{mol} = M_n}$

3) "LIVING" MEANS CHAINS DON'T CONNECT

$$10 \text{ mmol INITIATOR} \left| \frac{1 \text{ mol}}{1000 \text{ mmol}} \right| \frac{2 \text{ mol POLYMER CHAIN}}{1 \text{ mol INITIATOR}} = 0.02 \text{ mol POLYMERS}$$

MW MONOMER = $200 \frac{g}{mol}$

$$1.2 \text{ kg MONOMER} \left| \frac{1000 g}{1 kg} \right| \frac{1 \text{ mol}}{200 g} \left| \frac{0.5 \text{ mol MONOMER REACTED}}{1 \text{ mol MONOMER IN BEGINNING}} \right. = 3 \text{ mol MONOMER REAC}$$

$$n = \frac{3 \text{ mol MONOMER IN POLYMER}}{0.02 \text{ mol POLYMER}} = \boxed{150}$$