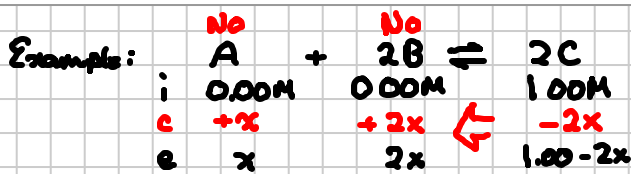


# Lecture 95 material shifts

Note Title

10/52/50/11



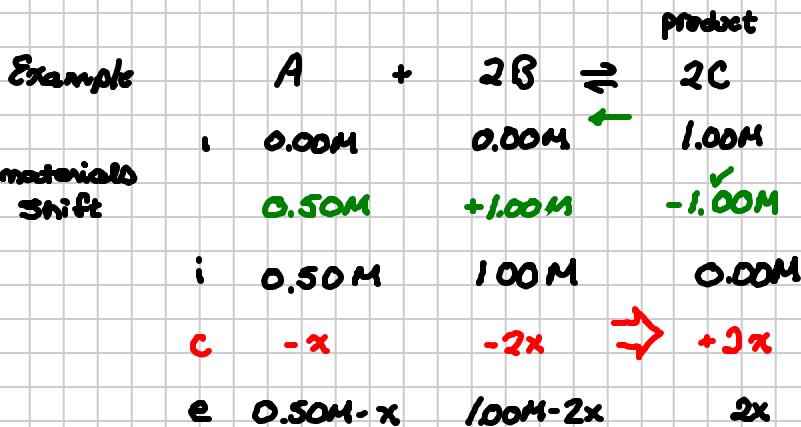
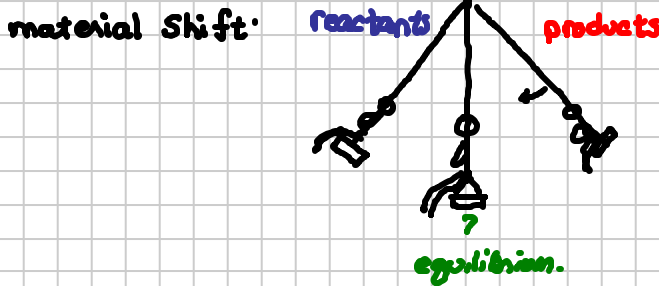
Small .. favors reactants

$K_c = 1.0 \times 10^{-8}$

L.M.A.  $K_c = \frac{[C]^2}{[A][B]^2}$

$1.0 \times 10^{-8} = \frac{(1.00-2x)^2}{(x)(2x)^2}$  ? NO

ouch!



$K_c = 1.00 \times 10^{-8}$

$2C/2B = 1.1$   
 $1A/2C = 1.2$

L.M.A.  $K_c = \frac{[C]^2}{[A][B]^2}$

$1.00 \times 10^{-8} = \frac{(2x)^2}{(0.50-x)(1.00-2x)^2}$

x=0 x=0

$1.00 \times 10^{-8} = \frac{4x^2}{(0.50)(1.00)^2}$

$K_c = 1.0 \times 10^{-8}$  react!  
 initially, start w/ react

$x = 3.55 \times 10^{-5}$  ✓ 5% ☺

$[A]_e = 0.50 - x \approx 0.50M$

$[B]_e = 1.00 - 2x \approx 1.00M$  ✓ equil. constant

$[C]_e = 2x = 7.1 \times 10^{-5}$