15.3 Homogeneous Product Markets 3

Saturday, April 3, 2021 11:47 AM

Stackelberg Competition

$q_2 = .1925 - \frac{1}{2}q_1$ $\quad c = .013 \quad k = .005 \quad f = .05$

$P = 1 - q_1 - q_2$

$R_2(q_1) = q_2$

$\pi_1 = (1-(.1925 - \frac{1}{2}q_1) - q_1)q_1 - .015q_1 - .05$

$\frac{d\pi}{dq_1} = (1 - .1925) - q_1 - .015 = 0$

$q_1 = 1 - .015 - .1925 = .1925$

$q_2 = .1925 - \frac{1}{2}.1925 = .09625$

$P = 1 - .1925 - .09625 = .7$

Oligopoly!

$\pi_{mon} = .193$
$\pi_{stLD} = .071$
$\pi_{coy} = .058$
$\pi_{stfol} = .011$