# 15.1 Homogeneous Product Markets 1

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$P = 1 - \beta Q$

$\beta$ = slope

$P = 1 - Q$

$nP = N(1 - Q)$

$n = 1$

$Q = 1 - P$

$Q = 1 - 0 = 1$

$P = 1, Q = 1 - 1 = 0$

} monopoly

$C(q) = cq + k\bar{q} + F$ ; $k$ = capacity cost

$\bar{q} \geq q$ ; $\bar{q}$ = capacity

with no uncertainty $\bar{q} = q$

$c = .01 \quad k = .005 \quad F = .05$

$\pi = (1 - q)q - .015q - .05$

$1 - 2q = .015$

$q = (1 - .015)/2 = .4925$

$\beta = 1 - .4925 = .5075$

Announces price meet all demand at that price

Bertrand competition

$P_1 < P_2$, $q_2 = 0$, $q_1 = 1 - P$ → If prices equal, split market

$q = (1 - c - k - \varepsilon) \geq 1 - c - k - \varepsilon/2$ → excess capacity $= \frac{1 - c - k - \varepsilon}{2}$

Capacity is strategic choice