

## Daily Exercise Solution

Demand by a type A person?

$$\text{WTP equation: } WTP_A = 200 - \frac{1}{4}Q_A$$

$$\text{Decision rule: } WTP_A = P$$

Substituting and solving:

$$P = 200 - \frac{1}{4}Q_A$$

$$P - 200 = -\frac{1}{4}Q_A$$

$$Q_A = 800 - 4P$$

Demand by a type B person?

$$WTP_B = 200 - Q_B$$

$$WTP_B = P$$

Substituting and solving:

$$P = 200 - Q_B$$

$$Q_B = 200 - P$$

## Market demand?

$$Q_M = Q_A + Q_B + Q_B$$

$$Q_M = Q_A + 2Q_B \quad \text{In general: } Q_M = N_A Q_A + N_B Q_B$$

$$Q_M = (800 - 4P) + 2(200 - P)$$

$$Q_M = (800 - 4P) + (400 - 2P)$$

$$Q_M = 1200 - 6P$$

## Intercepts?

$$P = 0 \quad Q_M = 1200 - 6 * 0$$
$$Q_M = 1200$$

$$Q_M = 0 \quad 0 = 1200 - 6P$$
$$P = 200$$

## Graph:

