Daily Exercise Solution

Demand by A?

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

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 B?

$$WTP_B = 200 - Q_B$$
$$WTP_B = P$$

Substituting and solving:

$$P = 200 - Q_B$$

$$Q_B = 200 - P$$

Market demand?

$$Q_M = Q_A + Q_B$$

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

$$Q_M = 1000 - 5P$$

Intercepts?

$P = 0$	$Q_M = 1000 - 0$ $Q_M = 1000$
$Q_M = 0$	$0 = 1000 - 5P$ $P = 200$

P

200

Q_M^D, WTP_M

1000 Q_M