TOTAL EXPENDITURE AND TOTAL REVENUE

Let Q = quantity actually bought and sold

Definitions:

TE = total expenditure by buyers = PQ

TR = total revenue to sellers = PQ

Notice that: $TE = TR$ always

If $Q = Q_d$ then we can find $TE = TR$ from the demand curve

($Q = Q_d$, however, is not always true)

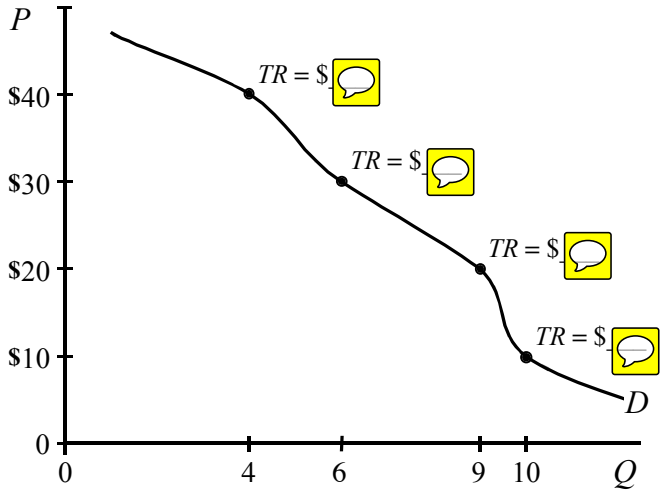
We will use $TR = PQ$ as our notation for actual total expenditure and actual total revenue when PQ is calculated along the demand curve.

When does $Q = Q_d$?

Case ① Excess supply or equilibrium in a supply-demand market

Case ② Price floor

Case ③ Other situations, some of which we will be studying this year.



ELASTICITY AND TOTAL REVENUE

Situation	Conclusion	Explanation
① *if:* $\eta > 1$ and $P\downarrow$	$TR\uparrow$	$P\downarrow \Rightarrow Q\uparrow$ along D so opposite effects on $TR \rightarrow \overset{\downarrow}{P}\,x\,\overset{\uparrow}{Q}$. $\eta > 1$ means $(\%\Delta Q) > (\%\Delta P)$ so $(\%\Delta Q)\uparrow > (\%\Delta P)\downarrow$ $\therefore TR\uparrow$
② *if:* $\eta > 1$ and $P\uparrow$	$TR\downarrow$	$P\uparrow \Rightarrow Q\downarrow$ along D so opposite effects on $TR \rightarrow \overset{\uparrow}{P}\,x\,\overset{\downarrow}{Q}$. $\eta > 1$ means $(\%\Delta Q) > (\%\Delta P)$ so $(\%\Delta Q)\downarrow > (\%\Delta P)\uparrow$ $\therefore TR\downarrow$
③ *if:* $\eta < 1$ and $P\downarrow$	$TR\downarrow$	$P\downarrow \Rightarrow Q\uparrow$ along D so opposite effects on $TR \rightarrow \overset{\downarrow}{P}\,x\,\overset{\uparrow}{Q}$. $\eta < 1$ means $(\%\Delta Q) < (\%\Delta P)$ so $(\%\Delta Q)\uparrow < (\%\Delta P)\downarrow$ $\therefore TR\downarrow$
④ *if:* $\eta < 1$ and $P\uparrow$	$TR\uparrow$	$P\uparrow \Rightarrow Q\downarrow$ along D so opposite effects on $TR \rightarrow \overset{\uparrow}{P}\,x\,\overset{\downarrow}{Q}$. $\eta < 1$ means $(\%\Delta Q) < (\%\Delta P)$ so $(\%\Delta Q)\downarrow < (\%\Delta P)\uparrow$ $\therefore TR\uparrow$
⑤ *if:* $\eta = 1$ and $P\downarrow$	**TR unchanged**	$\eta = 1$ means $(\%\Delta Q) = (\%\Delta P)$ so $(\%\Delta Q)\uparrow = (\%\Delta P)\downarrow$ $\therefore TR$ unchanged
OR		
$\eta = 1$ and $P\uparrow$	**TR unchanged**	$\eta = 1$ means $(\%\Delta Q) = (\%\Delta P)$ so $(\%\Delta Q)\downarrow = (\%\Delta P)\uparrow$ $\therefore TR$ unchanged