

# Answers *Microeconomics*

## 2a Elasticities

### 01 Price elasticity of demand 1

$$e = \frac{-1.5}{3} = -0.5 \rightarrow 0.5$$

### 02 Price elasticity of demand 2

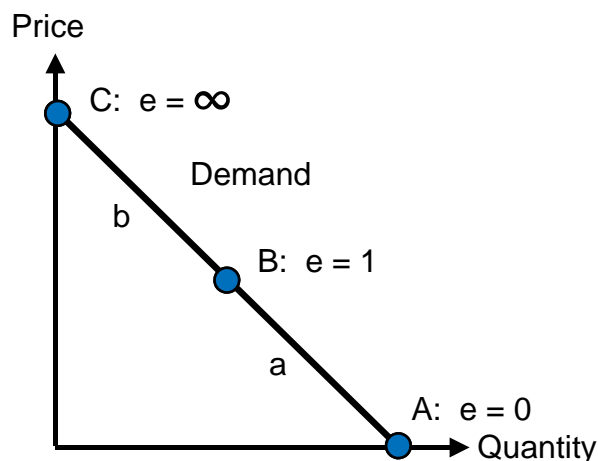
$$\textcircled{1} \quad e = \frac{\frac{4000}{10000}}{\frac{2}{5}} = 1 \text{ (absolute value)}$$

$$\begin{aligned} \textcircled{2} \quad \text{Turnover before price change} &= 6 * 8000 = 48000 \\ \text{Turnover after price change} &= 4 * 12000 = 48000 \\ \rightarrow \text{Turnover unchanged} \end{aligned}$$

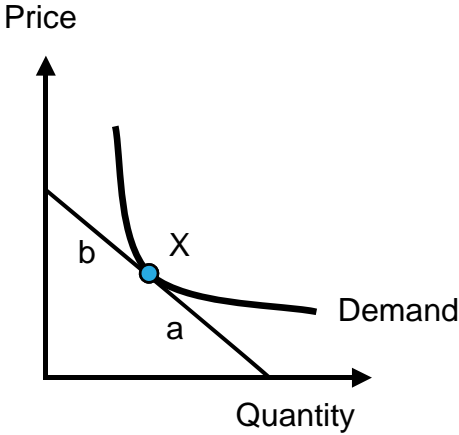
### 03 Price elasticity of demand 3

	Price	*	Quantity	=	Turnover
before change	1	*	1	=	1
$\textcircled{1}$	0.88	*	1.15	=	1.012
Turnover <b>rises</b> by 1.2 %					
$\textcircled{2}$	1.1	*	0.88	=	0.968
Turnover <b>falls</b> by 3.2 %					
$\rightarrow$ Alternative $\textcircled{1}$ is chosen.					

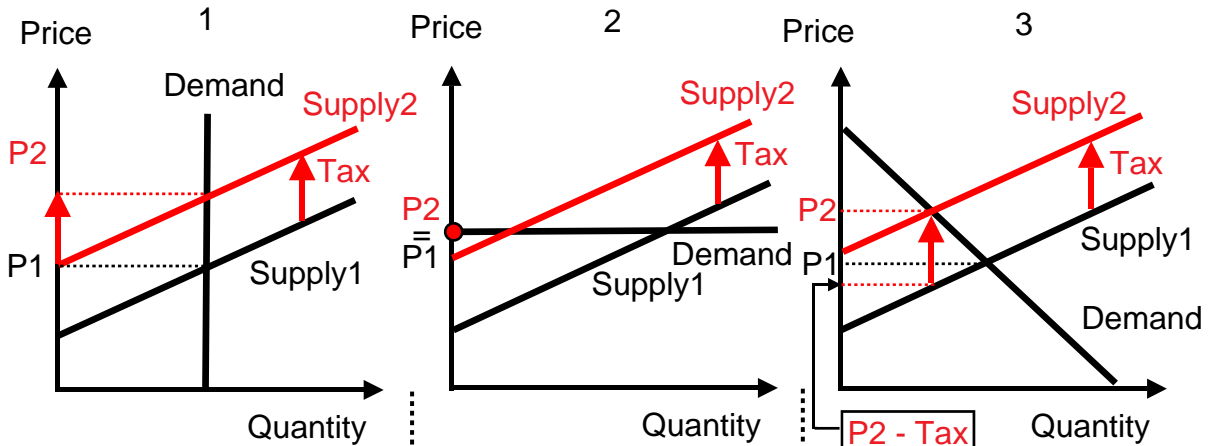
### 04 Price elasticity of demand 4



**a** (between A and B)  $\rightarrow 0 < e < 1$   
**b** (between B and C)  $\rightarrow 1 < e < \infty$

<p><b>05</b></p>	<p><b>Price elasticity of demand 5</b></p> <p>① <math>e = 0</math>          ② <math>e = \infty</math>          ③ <math>e = 1</math> (constant turnover of 9)</p>
<p><b>06</b></p>	<p><b>Price elasticity of demand 6</b></p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="border: 1px solid black; background-color: yellow; padding: 5px; margin-left: 20px;"> <p style="text-align: center;"><b>Steps</b></p> <p>1 Put tangent at X</p> <p>2 <math>e = \frac{a}{b}</math></p> </div> </div>
<p><b>07</b></p>	<p><b>Income elasticity of demand 1</b></p> <p>① Good X: Normal good, necessity          ② Good Y: Normal good, luxury good          ③ Good Z: Inferior good</p>
<p><b>08</b></p>	<p><b>Income elasticity of demand 2</b></p> <p>① Good A: <math>5\% * 3 = 15\%</math>          ② Good B: <math>5\% * -0.2 = -1\%</math></p>
<p><b>09</b></p>	<p><b>Cross-price elasticity of demand</b></p> <ul style="list-style-type: none"> <li>• If cross-price elasticity of demand <math>&gt; 0</math>, then C and D are substitutes.</li> <li>• If cross-price elasticity of demand <math>&lt; 0</math>, then C and D are complements.</li> </ul>
<p><b>10</b></p>	<p><b>Elasticities and types of good</b></p> <p>① The demand for this good is price inelastic (<math>0 &lt; e &lt; 1</math>).          ② It is an inferior good (Income elasticity of demand <math>&lt; 0</math>).          ③ It is a complement to another good (Cross-price elasticity of demand <math>&lt; 0</math>).</p>

## 11 Elasticities and tax incidence



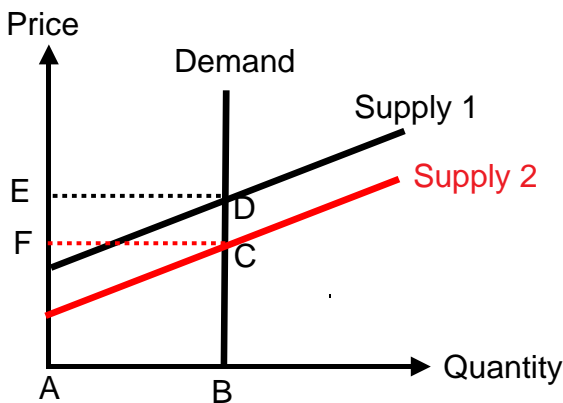
① Tax is completely borne by the **buyer** ( $P_2 = P_1 + \text{Tax}$ ).

① Tax is completely borne by the **seller** ( $P_2 = P_1$ ).

① Tax is borne partially by the **buyer** ( $P_2 < P_1 + \text{Tax}$ ) and partially by the **seller** ( $P_1 > P_2 - \text{Tax}$ ).

② The **lower** the price elasticity of demand, the more the tax is borne by the **buyer** (if  $e = 0$ , the tax is completely borne by the buyer).  
The **higher** the price elasticity of demand, the more the tax is borne by the **seller** (if  $e = \infty$ , the tax is completely borne by the seller).

## 12 Elasticity and turnover



The turnover is **reduced** by the bumper crop.

- Turnover before the bumper crop: ABDE
- Turnover after the bumper crop: ABCF
- Loss in turnover: FCDE

To 2b Elasticities (MC): [www.economics.li/downloads/Elasticities.htm](http://www.economics.li/downloads/Elasticities.htm)

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