

A.1 α) Σ

A.2 β

β) Λ

A.3 γ

γ) Σ

δ) Λ

ϵ) Λ

ΘΕΜΑ Γ

ο πίνακας συμπληρωμένος

	X	Ψ	ΚΕ _X	$\Psi' \cdot 1,5 \text{ ή } + \frac{50}{100}$
A	0	; 160		240
	για 40	$\rightarrow \Psi = 140$; 0,5	
B	80	120		180
	$x = 90$	\leftarrow για $\Psi = 110$	1	
Γ	; 120	80		120
	για 130	$\rightarrow \Psi = 60$	2	
Δ	140	; 40		60
			; 4	
E	150	0		

Γ.1

$$A \rightarrow KE_x = \frac{\Delta \psi}{\Delta x} \Rightarrow KE_x = \frac{160 - 120}{80 - 0} \Rightarrow KE_x = \frac{1}{2}$$

$$B \rightarrow \Gamma \rightarrow I = \frac{40}{x - 80} \Rightarrow x - 80 = 40 \Rightarrow x = 120$$

$$\Gamma \rightarrow A \rightarrow \rho = \frac{80 - \psi}{20} \Rightarrow 40 = 80 - \psi \Rightarrow \psi = 40$$

$$A \rightarrow E$$

$$KE_x = \frac{40}{10} \Rightarrow KE_x = 4$$

Γ.2

$$0,5 = \frac{160 - \psi}{40} \Rightarrow \psi = 140$$

Άρα $x = 40$ & $\psi = 150$ Ανεφικτό

$$\rho = \frac{80 - \psi}{10} \Rightarrow 20 = 80 - \psi \Rightarrow \psi = 60$$

Άρα $x = 130$ & $\psi = 50$ Εφικτό

$$\Gamma.3 \quad B \rightarrow \Gamma \rightarrow I = \frac{120 - 110}{x - 80} \Rightarrow x - 80 = 10 \Rightarrow x = 90$$

Θυσία ζουνται 90 μονάδες X

Αυξάνεται το KE_x

Γ.4

ΘΕΜΑ Δ

$$Q_D = \frac{400}{P} \quad Q_S = 30 + P$$

Δ.1

$$Q_D = Q_S \Leftrightarrow$$

$$\frac{400}{P} = 30 + P \Leftrightarrow$$

$$P^2 + 30 \cdot P - 400 = 0$$

$$a \cdot P^2 + \beta \cdot P - \gamma = 0 \quad a = 1$$

$$\beta = 30$$

$$\gamma = -400$$

$$\Delta = \beta^2 - 4a\gamma \Leftrightarrow$$

$$\Delta = 30^2 - 4 \cdot 1 \cdot (-400) \Leftrightarrow$$

$$\Delta = 900 + 1.600 \Rightarrow \Delta = 2.500$$

$$\sqrt{2500} = 50$$

$$P = \frac{-\beta \pm \sqrt{\Delta}}{2 \cdot a} \Rightarrow P = \begin{cases} \frac{-30 + \sqrt{2.500}}{2 \cdot 1} & P = 10 \\ \frac{-30 - \sqrt{2.500}}{2 \cdot 1} & P = -40 \end{cases}$$

Απορριπτό

Για $P = 10 \quad Q_D = \frac{400}{10} \Rightarrow Q_D = 40$

$$Q_S = 30 + 10 \Rightarrow Q_S = 40$$

$$\boxed{P_0 = 10 \quad \text{και} \quad Q_0 = 40}$$

Δ.2 $\Pi = Q_S - Q_D \Rightarrow 30 = 30 + P - \frac{400}{P} \Leftrightarrow P^2 = 400$
 $P = 20$

$$\underline{P_K = 20}$$

Δ.3

π, P_k

a) $30 \cdot 20 = 600$

β) $30 \cdot 15 = 450$

$600 - 450 = 150$ Επιβαρύνθηκε

Δ.4

OX1

1000€ (in) υποβόλιν

