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3.

(A)
$\begin{cases} MRS_{XY} = \dfrac{\frac{1}{2}x}{\frac{1}{2}} = \dfrac{Y}{X} = 1 \quad X = 2Y \\ 10X + 20Y = 1000 \end{cases}$ 　40Y = 1000

$V_0 = 50 \times 25 = 1250$ 　Y$_0$ = 25, X$_0$ = 50

(B)
$\begin{cases} MRS_{XY} = \dfrac{20}{20} = 1 \\ 20X + 20Y = 1000 \end{cases}$ 　40Y = 1000

$V_1 = 25 \times 25 = 625$ 　Y$_1$ = 25 　X$_1$ = 25

(C)
　稅收 = 10 × 25 = 250

(D)
$\begin{cases} MRS_{XY} = \dfrac{\frac{1}{2}}{\frac{1}{2}} = \dfrac{Y}{X} \quad X = 2Y \\ 10X + 20Y = 750 \end{cases}$ 　40Y = 750

　Y$_2$ = 18.75

　X$_2$ = 37.5

$V_2 = 18.75 \times 37.5 = 703.125$

(E)
　抑制消費型酒的角度,消費稅較能抑制
　因為 X$_1$ < X$_2$

(F)
　定額稅,因為 V$_2$ > V$_1$. 703.125 > 625

(G)
$\begin{cases} MRS_{XY} = \dfrac{20}{20} = 1 \quad X = Y \\ 20X + 20Y = 1250 \end{cases}$ 　40Y = 1250 　X = 31.25 　Y = 31.25

$V = 31.25 \times 31.25 = 976.5625$

　效用下降 V < 1250