



المجمع العربي للمحاسبين القانونيين
Arab Society of Certified Accountants (ASCA)

(ACPA)

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$$\begin{aligned}
 Q_d &= Q_s \\
 120 - 8P &= -6 + 4P \\
 126 &= 12P \\
 10.5 &= P \\
 \text{Then } 36 &= Q
 \end{aligned}$$

$$\begin{aligned}
 Q_d &= Q_s \\
 120 - 8P &= -6 + 4(P - 4.5) \\
 120 - 8P &= -6 + 4P - 18 \\
 12P &= 144 \\
 P &= 12 \\
 \text{Then } Q &= 24
 \end{aligned}$$

$$12 - 10.5 = 1.5$$

$$4.5 - 1.5 = 3$$

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$$\begin{aligned}
 \pi &= TR - TC \\
 195 &= 17Q - 555 - 12Q \\
 195 &= 5Q - 555 \\
 750 &= 5Q \\
 150 &= Q \\
 \text{At Break even } TR &= TC \\
 17Q &= 555 + 12Q \\
 5Q &= 555 \\
 Q &= 111
 \end{aligned}$$

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$$\left(\right) \frac{\partial Q_y}{\partial P_y} \cdot \frac{P_y}{Q_y} = -1$$

$$\left(\right) \frac{\partial Q_y}{\partial P_x} \cdot \frac{P_x}{Q_y} = .2$$

$$\left(\right) \frac{\partial Q_y}{\partial m} \cdot \frac{m}{Q_y} = 1$$

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$$\left(, \right) TR_A = 48Q_A - 2Q_A^2$$

$$\left(, \right) TR_B = 60Q_B - Q_B^2$$

$$\left(, \right) \pi = 48Q_A - 2Q_A^2 + 60Q_B - Q_B^2 - 15 - 10Q_A - 10Q_B$$

$$\pi = 38Q_A - 2Q_A^2 + 50Q_B - Q_B^2 - 5$$

$$\left(, \right) \frac{\partial \pi}{\partial Q_A} = 38 - 4Q_A = 0 \Rightarrow \text{Then } Q_A = 9.5$$

$$\left(\right) \frac{\partial \pi}{\partial Q_B} = 50 - 2Q_B = 0 \Rightarrow \text{Then } Q_B = 25$$

$$P_A = 48 - 19 = 29$$

$$P_B = 60 - 25 = 35$$

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$$= B_d - B_s$$

$$B_s + M_s = M_d + B_d$$

$$M_d - M_s = 0$$

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$$M.V = P.Q$$

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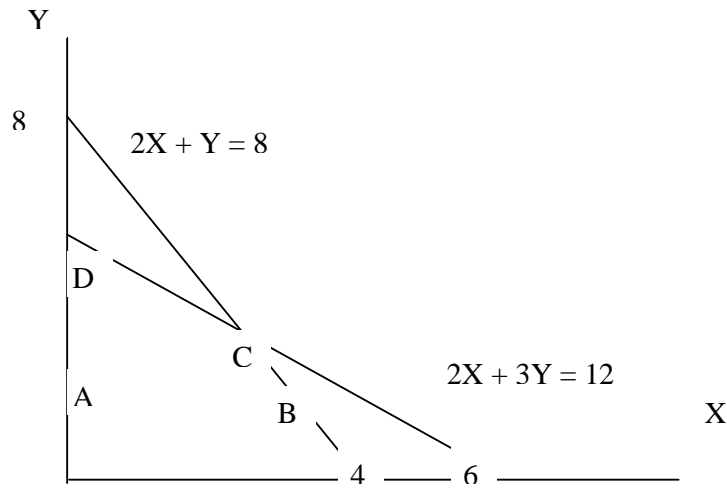
Q, V

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$$Z(A) = 3(0) + 0 = 0$$

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$$Z(B) = 3(4) + 0 = 12$$

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$$Z(C) = 3(3) + 2 = 11$$

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$$Z(D) = 3(0) + 4 = 4$$

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The maximum value of Z, subject to the constraints is 12, and it occurs when X = 4 and Y = 0.

$$0 = Y \quad 4 = X$$

$$= Z$$

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$$P_1 + 2P_2 + P_3 = 4$$

$$3P_1 + 4P_2 + 2P_3 = 8$$

$$2P_1 + P_2 + P_3 = 3$$

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$$\begin{bmatrix} 1 & 2 & 1 \\ 3 & 4 & 2 \\ 2 & 1 & 1 \end{bmatrix} \times \begin{bmatrix} P1 \\ P2 \\ P3 \end{bmatrix} = \begin{bmatrix} 4 \\ 8 \\ 3 \end{bmatrix}$$

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= P1

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= P2

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= P3

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Advertising Expenditures X	Sales Y	XY	X ²	Y ²
		360	16	8100
		500	25	10000
		261	9	7569
		62	1	3844
		273	9	8281
		388	16	9409
		279	9	8649
		550	25	12100
		176	4	7744
		392	16	9604
Total		3241	130	85300

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$$Y = AX + B$$

$$A = \frac{\eta \sum XiYi - (\sum Xi)(\sum Yi)}{\eta \sum Xi^2 - (\sum Xi)^2}$$

$$= \frac{10(3241) - (34)(916)}{10(130) - (34)^2} = \frac{1266}{144}$$

$$= 8.79$$

$$B = \frac{\sum Yi}{\eta} - A \frac{(\sum Xi)}{\eta}$$

$$= \frac{916}{10} - 8.79 \frac{(34)}{10} = 61.714$$

$$Y = 8.79 X + 61.714$$

$$r = \frac{\sum XY - \eta XY}{\sqrt{\sum Xi^2 - \eta(X)^2} \sqrt{\sum Yi^2 - \eta(Y)^2}}$$

$$X = \frac{34}{10} = 3.4, Y = 91.6$$

$$r = \frac{3241 - 10(3.4)(91.6)}{\sqrt{130 - 10(3.4)^2} \sqrt{85300 - 10(91.6)^2}}$$

$$= \frac{126.6}{\sqrt{14.4} \sqrt{1394.4}} = \frac{126.6}{(3.8)(37.34)}$$

$$= \frac{126.6}{141.7} = 0.8935$$

() $r^2 = (0.8935)^2 = 0.798$

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