Assignment 1/opgae 1

	(Y) Chairs	(X) Beds	Capacity
Opskæring / Cutting	12	24	2400
Pakning / Packing	20	30	3600
DB / CM	60	100 DKK	

Max Chairs (Y)	Max Beds (x)	α = Alpha	function
200	100	$\frac{200}{100} = -2$	$Y = -2x + 200$
180	120	$\frac{180}{120} = -1,5$	$Y = -1,5x + 180$

tilfældig DB - linie 6000

Random CM-line 6000

100 stk 60 stk

α_{Alpha} $\frac{100}{60} = 1\frac{2}{3} = 1,6\bar{6}$

$\frac{100}{CM_{chairs}} = -2$

$CM_{chairs} = 50$, CM_{chairs} må ikke blive mindre end 50 før vi skal stoppe produktionen af chairs.

Derfor maximum 60-50 = 10 DKK

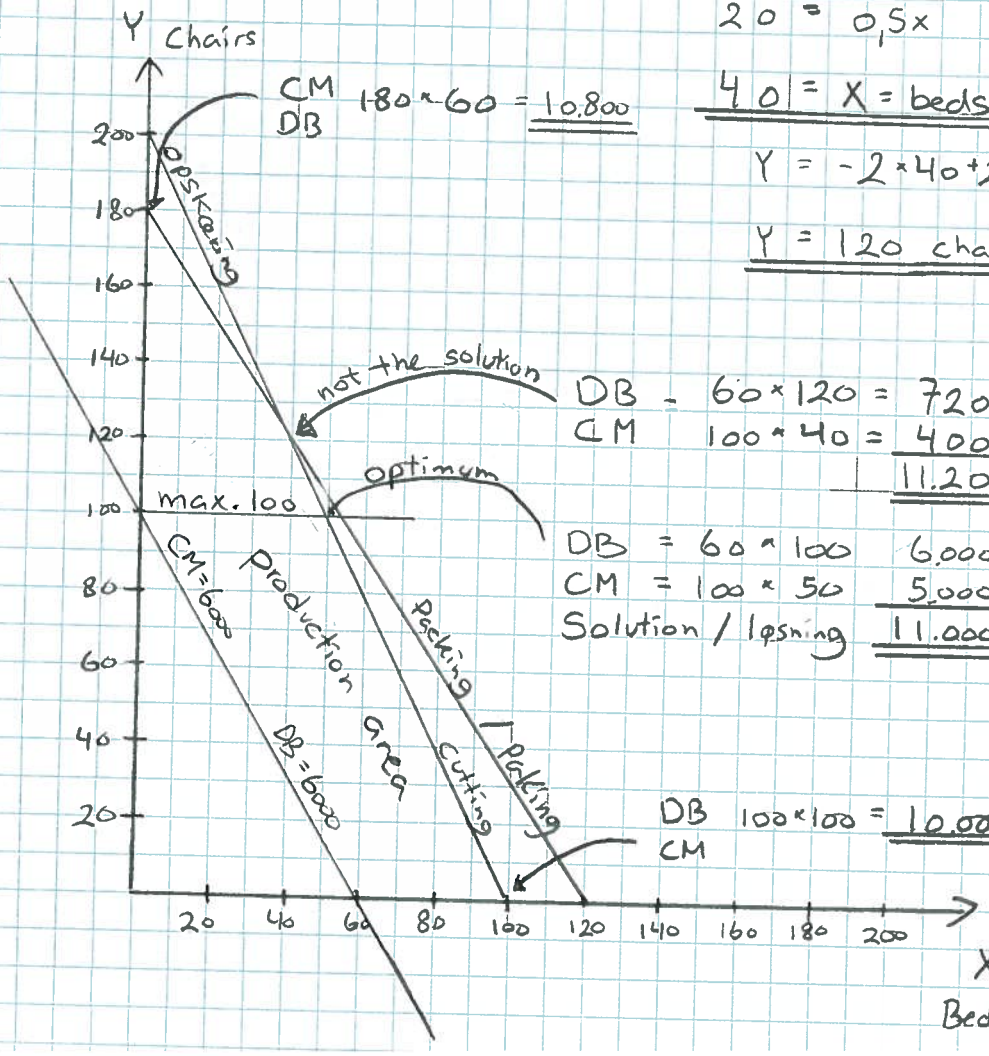
$-2x + 200 = -1,5x + 180$

$20 = 0,5x$

$40 = X$ = beds

$Y = -2 \cdot 40 + 200$

$Y = 120$ chairs



DB - 60 · 120 = 7200

CM 100 · 40 = 4000

11.200

DB = 60 · 100	6.000
CM = 100 · 50	5.000
Solution / løsning	11.000

6 January 2009

Assignment 2 / opgave 2

MR = 300

FC/Fo = 280.000

VC/Vo = $\frac{1}{200}x^2 + 50x$

TC/VC = $\frac{1}{200}x^2 + 50x + 280.000$

MC/MC = $\frac{1}{100}x + 50$

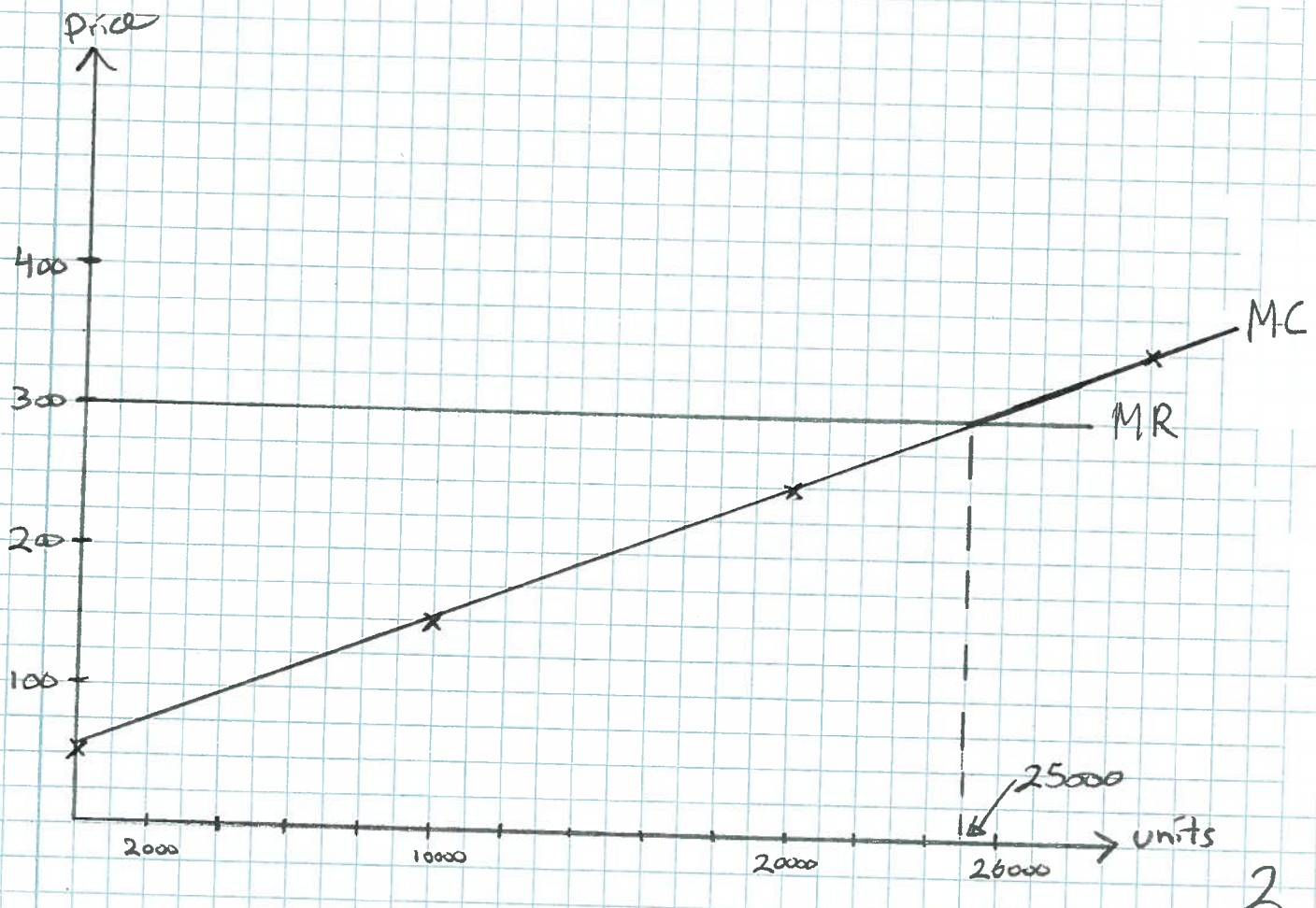
MR = MC

$300 = \frac{1}{100}x + 50$

$250 = \frac{1}{100}x$

$25000 = x$

Turnover / omsætning	25000 * 300	= 7.500.000
VC / Vo	$\frac{1}{200} \cdot 25000^2 + 50 \cdot 25000$ (3.125000 + 1250.000)	= 4.375.000
CM / DB		3.125.000
FC / FO		280.000
Profit		2845.000



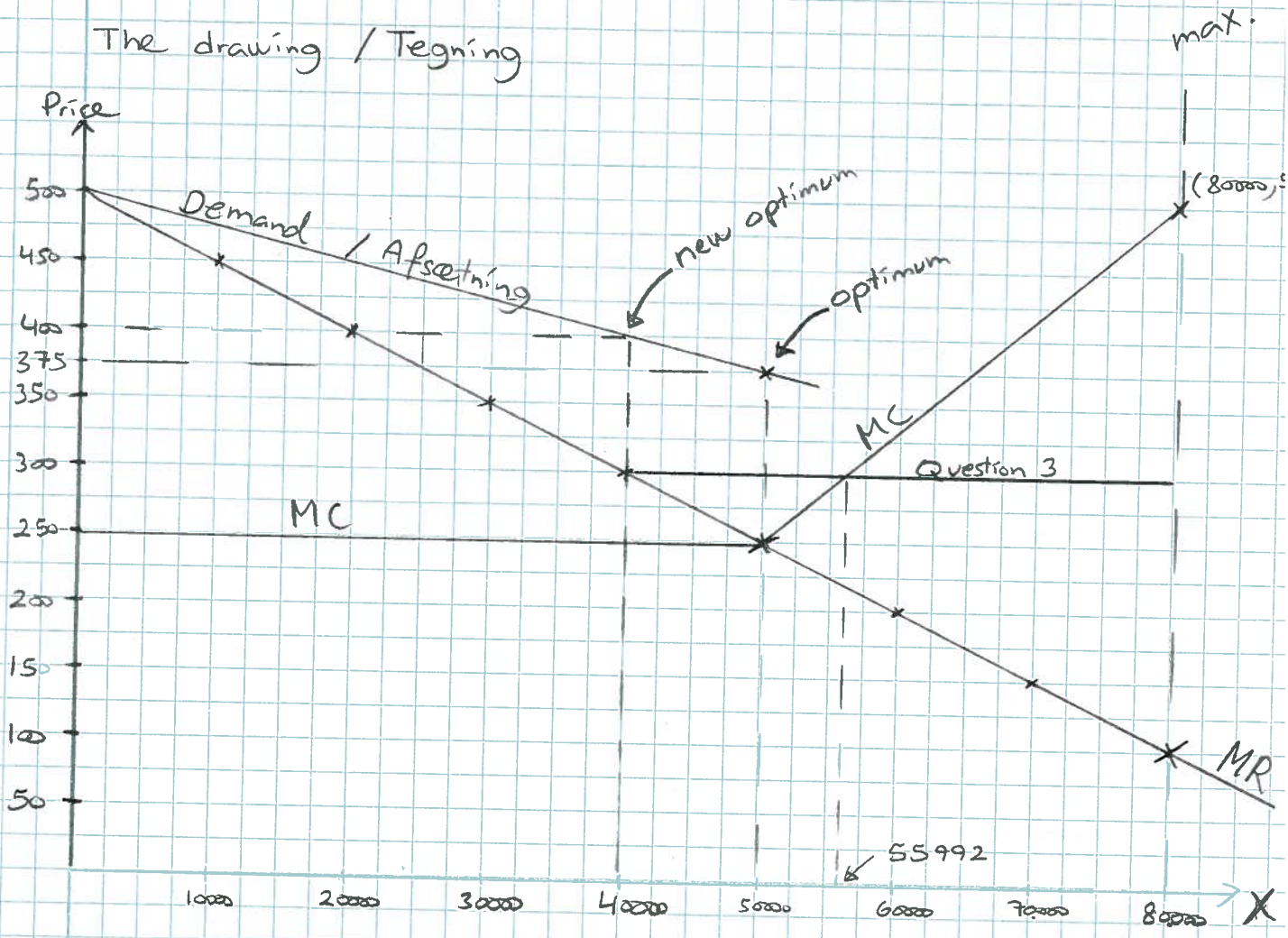
Assignment 3 / Opgave 3

$$P = -\frac{1}{400}X + 500$$

$$Px = -\frac{1}{400}X^2 + 500X$$

$$MR = -\frac{1}{200}X + 500$$

The drawing / Tegning



Turnover	375 × 50000 =	18,750,000
-VC	250 × 50000 =	12,500,000
CM / DB	125 × 50,000 =	6,250,000

Assignment 3 / opgave 3

$P = -\frac{1}{400 \times 1,20} X + 500$

$P = -\frac{1}{480} X + 500$

$R_x = -\frac{1}{480} X^2 + 500 X$

$MR = -\frac{1}{240} X + 500$

$MR = MC$

$-\frac{1}{240} X + 500 = \frac{1}{120} X - 166,\bar{6}$

$666,\bar{6} = \frac{2}{240} X + \frac{1}{240} X$

$666,\bar{6} = \frac{3}{240} X$

$160.000 = 3X$

$53.333 = X$

$P = -\frac{1}{480} \times 53333 + 500$

$P = 388,89$

Turnover $388,89 \times 53333$ = 20,740,670

$-VC \quad 250 \times 50.000$ = 12,500,000

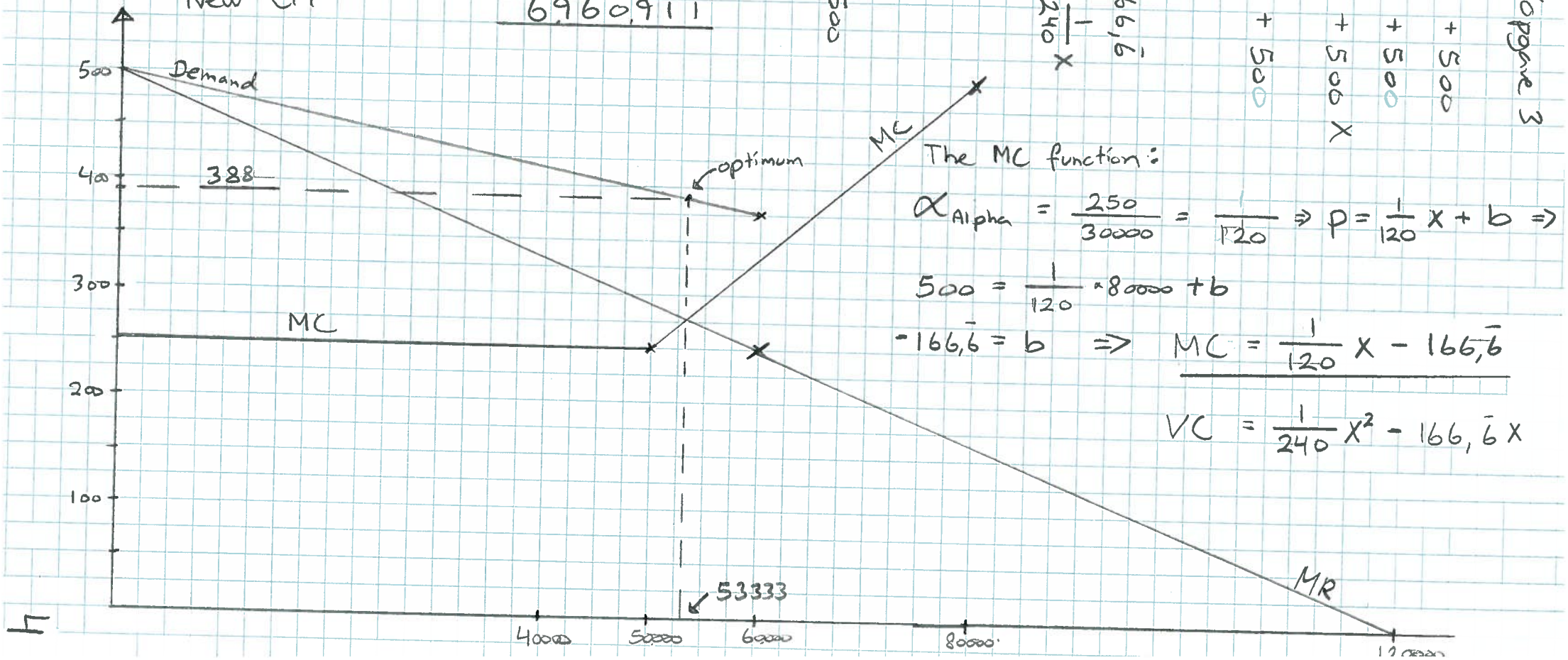
$+\left(\frac{1}{240} \times 53333^2 - 166,6 \times 53333\right) -$

$\left(\frac{1}{240} \times 50000^2 - 166,6 \times 50.000\right)$ = 879759

CM 7.360911

- Marketing campain 400000

New CM 6.960.911



The MC function:

$\alpha_{Alpha} = \frac{250}{30000} = \frac{1}{120} \Rightarrow P = \frac{1}{120} X + b \Rightarrow$

$500 = \frac{1}{120} \times 80000 + b$

$-166,\bar{6} = b \Rightarrow MC = \frac{1}{120} X - 166,\bar{6}$

$VC = \frac{1}{240} X^2 - 166,\bar{6} X$

Assignment 3 / opgave 3

$$MC = 300$$

$$\frac{1}{120} x - 166{,}\overline{6} = 300$$

$$\frac{1}{120} X = 466{,}\overline{6}$$

$$X = 56000$$

Turnover	40000 * 400	=	16,000,000
Turnover	16000 * 300	=	4,800,000
Total Turnover			20800000
- VC	50000 * 250	=	12,500000
(300 + 250) / 2 = 275 * 6.000		=	1,650,000
CM / DB			6,650000

Assignment 4 / opgave 4

$$e_p = -0,5 = \frac{\Delta M}{\Delta P} \Rightarrow -0,5 = \frac{\Delta M}{20\% \uparrow} \Rightarrow \Delta M = -10\%$$

Borde / Tables

	P	Q	
Omsætning før / Revenue before	1000	1000	= 1,000,000
Omsætning efter / Revenue after	1200	900	= 1.080.000
Ændringen / Change			+ 80.000

Krydspriselasticitet / Cross price elasticity $= -1 \Rightarrow \frac{\Delta M_{Tables}}{\Delta M_{chairs}} \Rightarrow \frac{-10\%}{\Delta M_{chairs}} \Rightarrow M_{chairs} = 10\%$

Stole / chairs

	P	Q	
Omsætning før / Revenue before	300	5000	= 1,500,000
Omsætning efter / Revenue after	300	4500	= 1.350.000
Ændring / Change			- 150.000

Total change +80.000 - 150.000 = -70.000

3) oplysninger om de variable omkostninger MC