

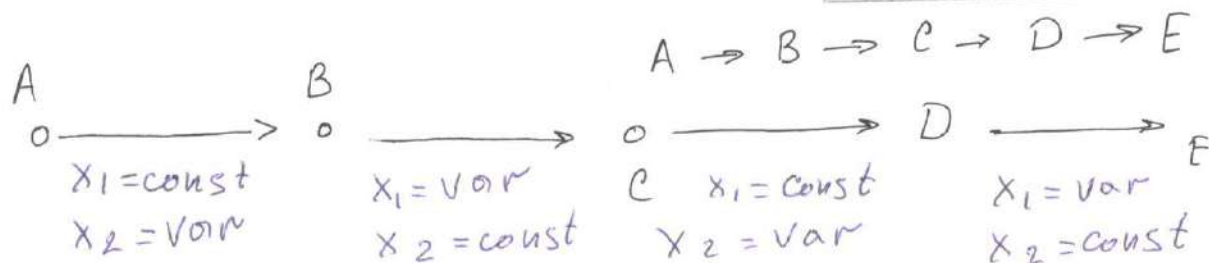
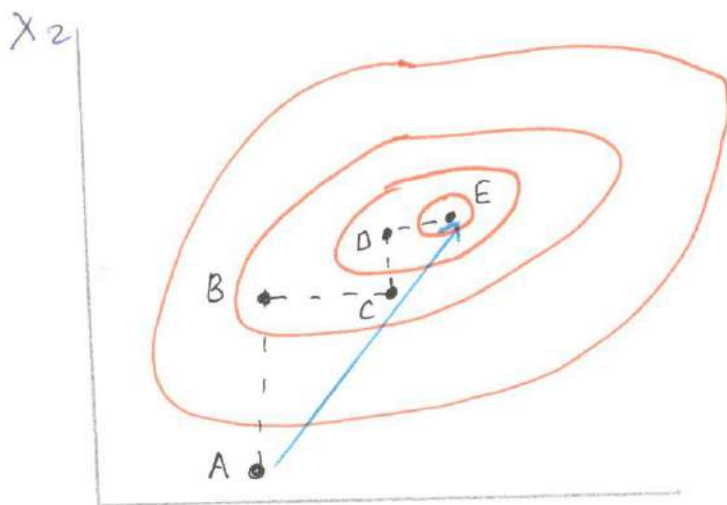
$$\frac{\partial y}{\partial x_1} = 0$$

$$\frac{\partial y}{\partial x_2} = 0$$

$$\frac{\partial y}{\partial x_n} = 0$$

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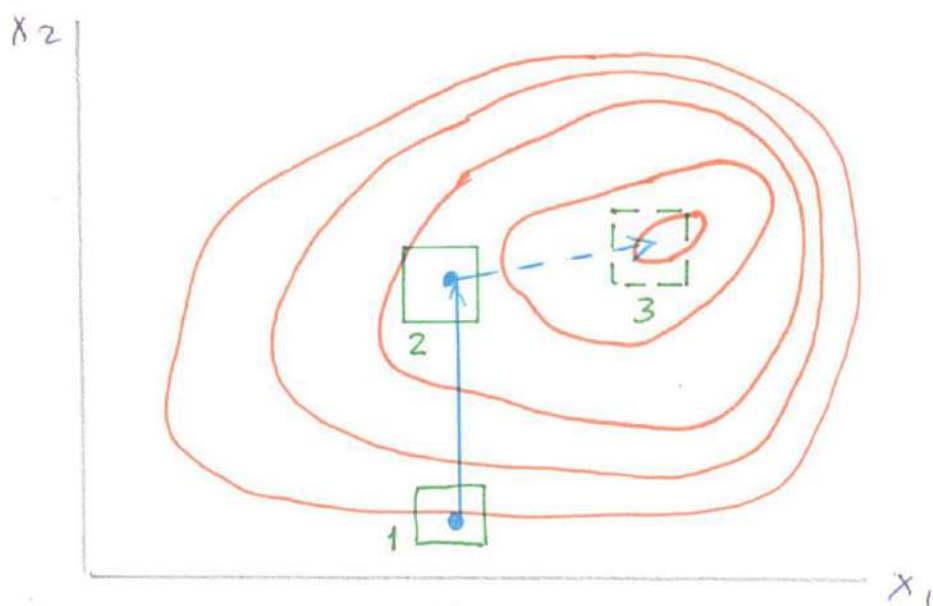
$$\vec{X} = (x_1, x_2, \dots, x_n) \quad (39)$$



Puc. 30

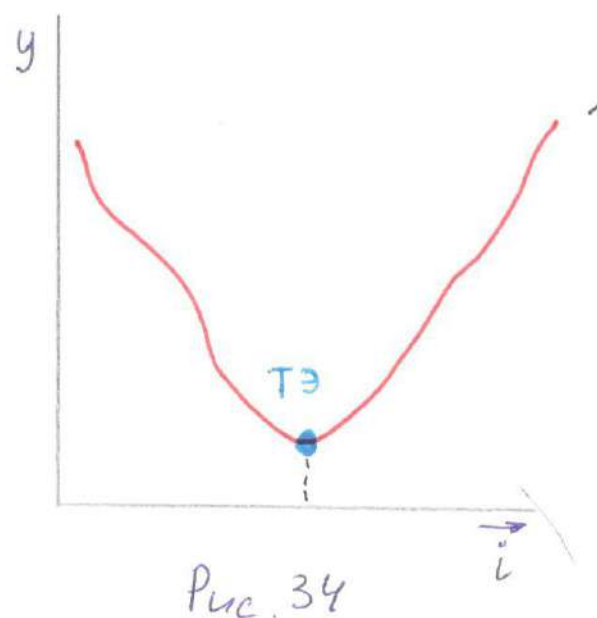
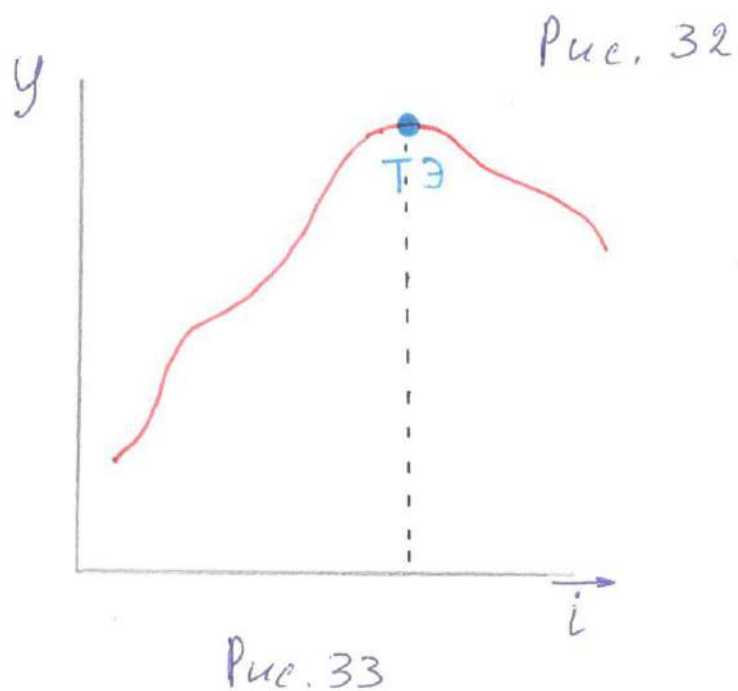
$$y = b_0 + \sum_{i=1}^n b_i x_i \quad (40)$$

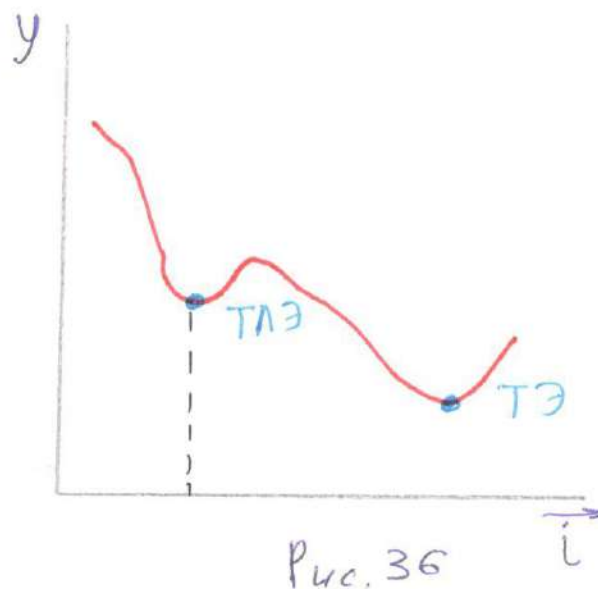
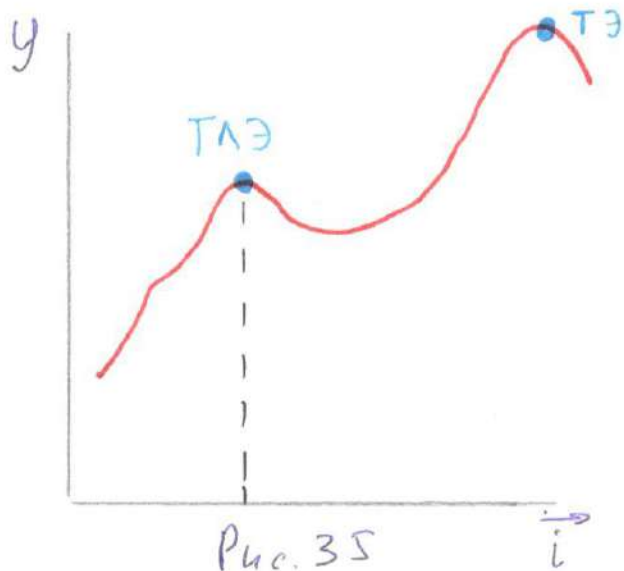
$$\text{grad } y = \nabla y = b_1 \vec{i} + b_2 \vec{j} + \dots + b_n \vec{n} \quad (41)$$



Puc. 31

ПКВ	Ф а к т о р ы				у
	x_1	x_2	...	x_n	
-1	$\bar{x}_1^0 - \bar{\lambda}_1$	$\bar{x}_2^0 - \bar{\lambda}_2$	...	$\bar{x}_n^0 - \bar{\lambda}_n$	
0	\bar{x}_1^0	\bar{x}_2^0	...	\bar{x}_n^0	
+1	$\bar{x}_1^0 + \bar{\lambda}_1$	$\bar{x}_2^0 + \bar{\lambda}_2$	...	$\bar{x}_n^0 + \bar{\lambda}_n$	
$\bar{\lambda}_i$	$\bar{\lambda}_1$	$\bar{\lambda}_2$	...	$\bar{\lambda}_n$	
b_i	b_1	b_2	...	b_n	
$b_i \bar{\lambda}_i$	$b_1 \bar{\lambda}_1$	$b_2 \bar{\lambda}_2$	...	$b_n \bar{\lambda}_n$	
$k_i = (b_i \bar{\lambda}_i) / (b_j \bar{\lambda}_j)_{\min}$	k_1	k_2	...	k_n	
$h_i = k_i \cdot h_{\min}$	h_1	h_2	...	h_n	
h'_i	h'_1	h'_2	...	h'_n	
о н а т а					
1	$\bar{x}_1^0 + h'_1$	$\bar{x}_2^0 + h'_2$	...	$\bar{x}_n^0 + h'_n$	y_1
2	$\bar{x}_1^0 + 2h'_1$	$\bar{x}_2^0 + 2h'_2$	...	$\bar{x}_n^0 + 2h'_n$	y_2
\vdots	\vdots	\vdots	...	\vdots	\vdots
k	$\bar{x}_1^0 + kh'_1$	$\bar{x}_2^0 + kh'_2$	...	$\bar{x}_n^0 + kh'_n$	y_k





$$b_1 = 3,06 \quad b_2 = 1,81 \quad b_3 = 1,31 \quad b_4 = -9,19$$

$$b_5 = 0 \quad b_6 = 2,81 \quad b_7 = 14,56$$

ПКБ	\bar{x}_1	\bar{x}_2	\bar{x}_3	\bar{x}_4	\bar{x}_5	\bar{x}_6	\bar{x}_7	y
$\bar{x}_{i \min}$	100	50	10	100	50	5	20	
\bar{x}_i^0	200	125	30	300	125	12,5	60	
$\bar{x}_{i \max}$	300	200	50	500	200	20	100	
b_i	3,06	1,81	1,31	-9,19	0	2,81	14,56	
$b_i \lambda_i$	306	-	-	-1838	-	21,07	582,4	
$\bar{\lambda}_i$	100	75	20	200	75	7,5	40	
k_i	14,52	-	-	-87,23	-	1	22,64	
h_i	29,04	-	-	174,46	-	2	55,28	
k_i	30	-	-	180	-	2	60	

1	230	125	30	120	125	14,5	120	140
2	260					16,5	180	164
3	290					18,5	240	251
4	320					20,5	300	264
5	350					22,5	360	300
6	380					24,5	420	340
7	410					26,5	480	348
8	440					28,5	540	353
9	470					30,5	600	350
10	500					32,5	660	353
11	530					34,5	720	358
12	560					36,5	780	360
13	590					38,5	840	355
14	620					40,5	900	330
15	650					42,5	960	305
16	680					44,5	1020	280
17	710					46,5	1080	280

Рис. 37

$$y = [y_{\text{ср.}}] - \text{ИПК}$$

$$b_1 = 2,4 \quad b_2 = 1,7 \quad b_3 = -0,9 \quad b_4 = 1,3 \quad b_5 = -0,11$$

ПКВ	факторы					упрощ.	уточ.
\bar{x}_i	\bar{x}_1	\bar{x}_2	\bar{x}_3	\bar{x}_4	\bar{x}_5		
\bar{x}_i^-	50	20	10	40	30		
\bar{x}_i^+	100	40	20	80	60		
\bar{x}_i^0	75	30	15	60	45		
λ_i	25	10	5	20	15		
b_i	2,4	1,7	-0,9	1,3	-0,11		
$b_i \lambda_i$	60	17	-4,5	26	-1,65		
k_i	36,6	10,3	-2,23	15,76	-1		
h_i	36,6	10,3	-2,23	15,76	-1		
h_i'	36	10	-3	15	-1		
1	75	40	12	75	44	29	
2			9		43	31	
3					42	32	
4					41	33	
5					40	34	
6					39	35	
7					38	36	33
8	111	50	6	90	30	50	
9					29	51	
10					28	52	
11					27	53	
12					26	54	
13					25	55	49

$$\bar{x}_1 = 111 \quad \bar{x}_2 = 50 \quad \bar{x}_3 = 6 \quad \bar{x}_4 = 90 \quad \bar{x}_5 = 25$$

оценка	факторы					упрощ.	уточ.
	\bar{x}_1	\bar{x}_2	\bar{x}_3	\bar{x}_4	\bar{x}_5		
1	111	50	6	90	25	49	
2	116	54		93	24	53	
3	121	58		96	23	57	
4	126	62		99	22	61	
5	131	66		102	21	62	58
6	136	70		105	20	59	
7	141	74		108	19	54	

Рис. 38