

1.

30

2.

3.

4.

5.

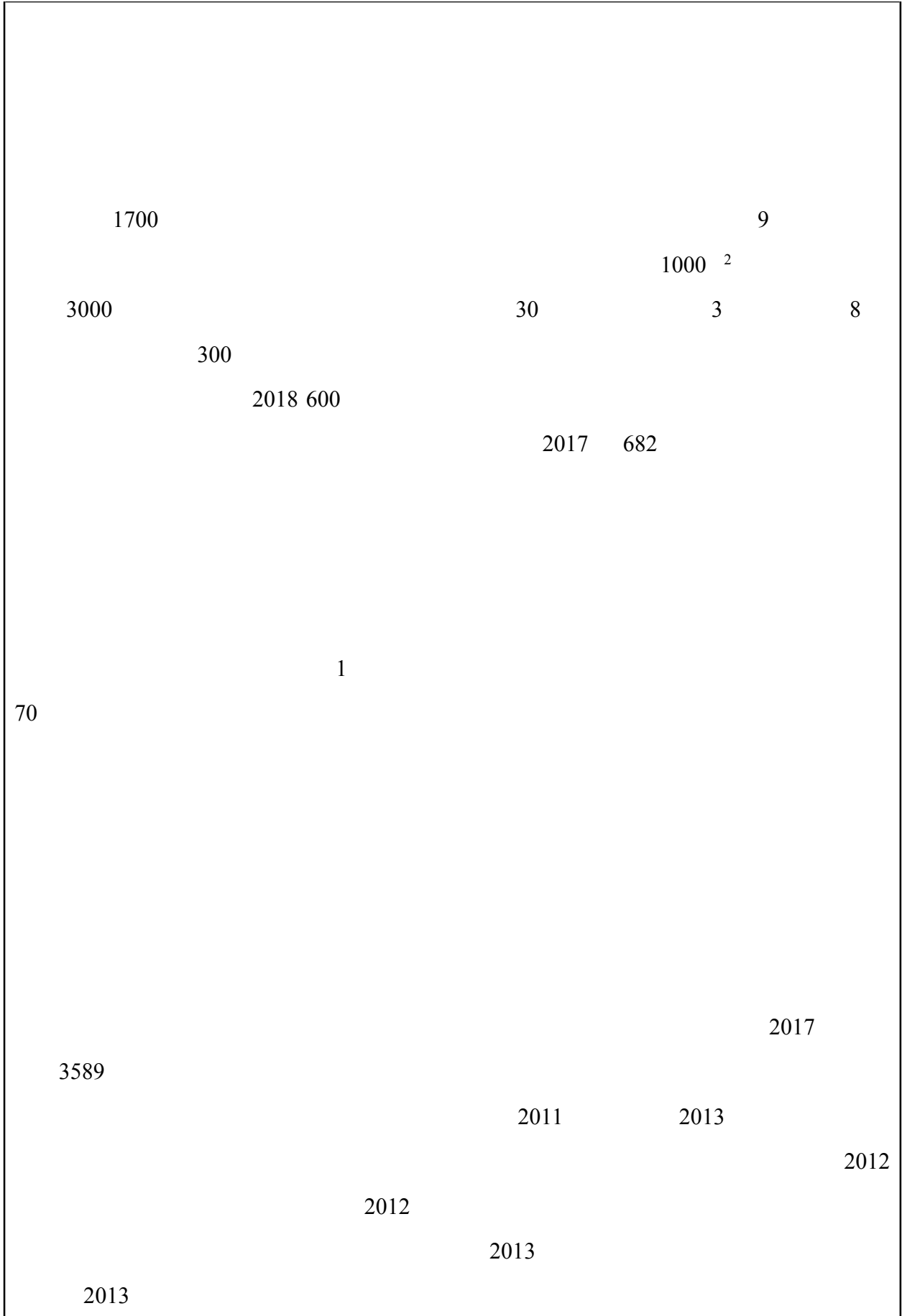
6.

7.

8.

	*			*
	9			
	*			211505
	9			
			2018 600	
			3589	
	1000 ²			
	1700		11	0.65%
			2019 1	
/	450	/	-	
/	4	3/	-	
/	-	/	-	
360 /				
18918-2002	A			

1		-		2	/ -18A
2		-		6	-6
3		-		2	-6
4		-		16	-430A /
5		-		4	630
6		-		1	3050*16/1
7		-		1	-360
8		-		1	/ 3015
9		-		1	
10		-		2	A 36
11		-		1	703-400
12		-		2	450
13		-		1	
14		-		1	/12150
15		-		1	
16		-		1	-618



2012

(2012)

2013 9

2015 118

2017

1

(2014-2030)

010

010

010

-

-

(2014-2030)

(2)

() 2002
2012 6 (2012 179)

2017 5

5 ()
7 2002

3

9
6

4
1

2018 74

8

15

730

1-6

				730

2

2017

(3095-2012)

244

66.85%

66.1%

2

2

3

10

2.5

0.080 / 3

0.042 / 3

0.14

0.19

10

2.5

5

(3838-2002)

(3096-2008)

3

3

4

1000 ²

3000

1600	1500 /	7200 /
800	150 /	
6800	200 /	
1100	1150 /	

1

450 /

2

18918-2002 A

3

4 /

1-8

		1000 ²	16 1 3

		1000 ²	16	3	3
		450 /			
		360 /			
		4 /			
		1000 ²	16	2	3
		5 ²			
		10 ²			

		11	0.65%		
		30	300	3	8
					9
			1000 ²	3	1
		2	3		3

					9
--	--	--	--	--	---

()

31 14' 32 36'

118 22 119 14'

300

150

50 70

30

6515.74 ²

()

40

9 ()

5.0 5.5

100

76.8%

113

100

19

231

15-16

6

7

222 224

1987 2170

2.5 / 20 /

56

5 () 26 () 25

180 ² 6300 ,

37.8% 21.6

350 900

700 900 350 , 624

8.4

3

9 ,

(1921 1991), 10.2 (

1954 8 17) 1.54 7.7 (1954)

1.56 (1951 12 31) 0.57 ,

92600 ^{3/} 28600 ^{3/}

4 7

18% 15%

1.8 ^{3/} 0.12 ^{3/}

13.6

1018 ^{3/} : 10.40

8.86 , 1220 ^{3/}

6.0

60 12.4 15.4 4 1 3 1 2.5

1 3 6.2 ,

35 12.4 32.0 4 3,

1.4 12

11

4 1 3

12.20

3

776 ,

29.50

20.4

8

385

26.5

5.5

9

20

10 85

10

40

40

130

100

10 22 40

					32 11	32 27
118 34	119 03					
					1485.5	²
46						
1					22	
	2451	²	37%			788
		11			14.67	
6.33			43.12%	0.1	0.65%	0.97
	6.58%	10	0.07		2.96	20.21%
		2.58	17.58%		0.18	1.25%
	0.61		4.14%	0.34	2.35%	0.6
		4.11%				
2012	8					:
					10	
		12				
2						
2016		800		10.6%		98.57
	11.6%			381.1		14.1%
		3120		23		55

3 5

40²

.2

10.5²

4.27²

6

5.5²

18²

6²

90

60

10.5²

5

110

110

2

9

860

()

22

478 ()

618 ()

85

:

32

52

1

69154

17970

74%

98.5%

6892

5494

82

1873

1033

365

18614

2A

3A

2A

;

300

1

				2018	8	2017
			244			66.85%
66.1%			10	2.5		
	2	2	3	10	2.5	
0.080 / ³	0.042 / ³			0.14	0.19	
		10	2.5			

10 2.5

2

				2018	8	2017
			25			12
4			9			
			5			

29

22

7

5

5

/

18918-2002

A

3

3-1

			()			
			870	300	(3095-2012)	
			730		3838-2002	
			6890		(3838-2002)	
			1		3096-2008 3	
			730			
			300	870		

2

3095-2012

4-1

2			0.06
	24		0.15
	1		0.5
			0.04
	24		0.08
			0.2
	24		0.004
	1		0.01
3	8		0.16
	1		0.2
2.5			0.035
	24		0.15
10			0.07
	24		0.15

3095-2012

3838-2002

63-94

4-2

	6 9	15	0.5	0.1	3	25
		30	1.5	0.3	6	60

2004

4-3

3	65	55

16297-1996

2

4-4

	/ 3		/		/ 3	
	120	15	3.5		1.0	16297-1996 2

(8978-1996)

(/ 31962-2015) 1

(18918-2002) A

	6 9	6 9
	500	50
	400	10
	45	5(8*)
	8	0.5
	70	15

: > 12

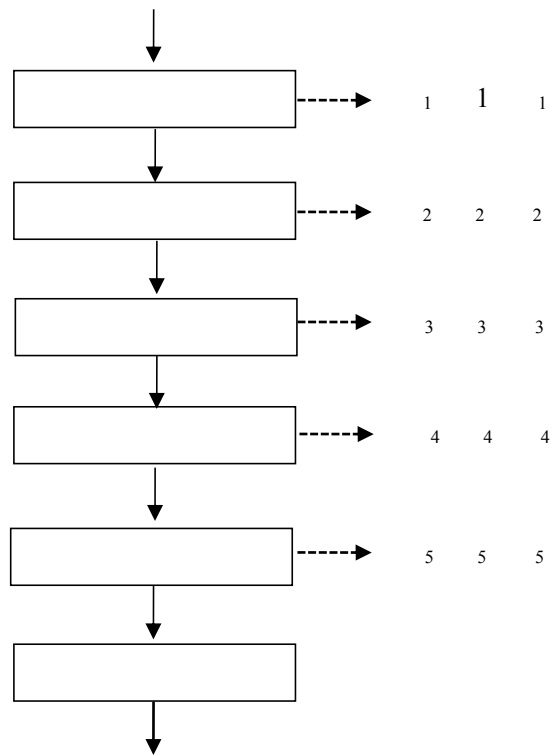
12

12348-2008

3

	3	65	55
--	---	----	----

5-1



1

1

1

1

2

			2	2	2
3					
	3	3		3	
4					4
4	4				
5					5
5		5			
6					
1	1	5			
		100			
0.1%			0.031 /		3000
				0.1%	
	0.0015 /			0.0325 /	
7200		0.0045 /			
			5-1		

0.0325

	1	5	80		
--	---	---	----	--	--

4

1 5

1 5

1%

0.325 /

1 /

1.5 /

1.5 /

0.5 /25 -

0.08 /

30

300

0.5 /

4.5 / ,

34330 2017

5-4

1					0.325			34330 20 17
2					1			
3					1.5			
4					1.5			
5					0.08			

6						4.5			
---	--	--	--	--	--	-----	--	--	--

5-5

1						/	82/61	0.325	
2						/	61	1	
3						08	900-249-08	1.5	
4						17	336-064-17	1.5	
5						49	900-041-49	0.08	
6						/	99	4.5	

1		08	900-249-08	1.5						
2		17	336-064-17	1.5						/
3		49	900-041-49	0.08						/

				0.0325 /		0.0325 /	
		360 ^{3/}	3 ⁻	400 / 0.144 /	320 / 0.1152 /	50 / 0.018 /	
				300 / 0.108 /	240 / 0.0864 /	10 / 0.0036 /	
				25 / 0.009 /	25 / 0.009 /	5 / 0.0018 /	
				40 / 0.014 /	40 / 0.014 /	15 / 0.0054 /	
				5 / 0.0018 /	5 / 0.0018 /	0.5 / 0.00018 /	
				4.5 /		0	
				0.325 /		0	
				1.0 /		0	
				1.5 /		0	
				1.5 /		0	
				0.08 /		0	
	80 85 A						
	12348-2008 3						
	/	/	/	/	/	/	

10	0.0003308	0.04
100	0.002076	0.23
100	0.002076	0.23
200	0.002057	0.23
300	0.001939	0.22
400	0.001832	0.20
500	0.001566	0.17
600	0.00131	0.15
700	0.001098	0.12
800	0.0009348	0.10
900	0.0008047	0.09
1000	0.0007001	0.08
1100	0.0006177	0.07
1200	0.0005496	0.06
1300	0.0004925	0.05
1400	0.0004446	0.05
1500	0.0004039	0.04
1600	0.0003689	0.04
1700	0.0003387	0.04
1800	0.0003124	0.03
1900	0.000289	0.03
2000	0.0002684	0.03
	0.002148	0.24
	86	

0.002148 / ³

0.24% <10%

2

2.2-2008

		0.9	44*23	8	0.0045	

3

/ 13201-91

$$\frac{Q_c}{C_m} = \frac{1}{A} (B \cdot L^c + 0.25r^2)^{0.50} \cdot L^D$$

$$^2 = / 1/2$$

A

A

$$A=470 \quad =0.021 \quad =1.85 \quad =0.84 \quad 7-54$$

A	<2	400	400	400	400	400	400	80	80	80
	2-4	700	470	350	700	470	350	380	250	190
	>4	530	350	260	530	350	260	290	190	140
	<2	0.01			0.015			0.015		
	>2	0.021			0.036			0.036		
	<2	1.85			1.79			1.79		
	>2	1.85			1.77			1.77		
	<2	0.78			0.78			0.57		
	>2	0.84			0.84			0.76		

7-5

		0.9	0.0045	44*23	8	0.203	50

50

360 /

400 / 300 / 25 / 40 / 5 /

0.144 / 0.108 / 0.009 / 0.014 / 0.0018 /

320 /

240 / 25 / 40 / 5 /

0.1152 / 0.0864 /

0.009 / 0.014 / 0.0018 /

(8978-1996) 4

<500 / <400 /

3- 45 / 8 / 70 /

()

/

20%

21 3/

(

)

38.3

1.2

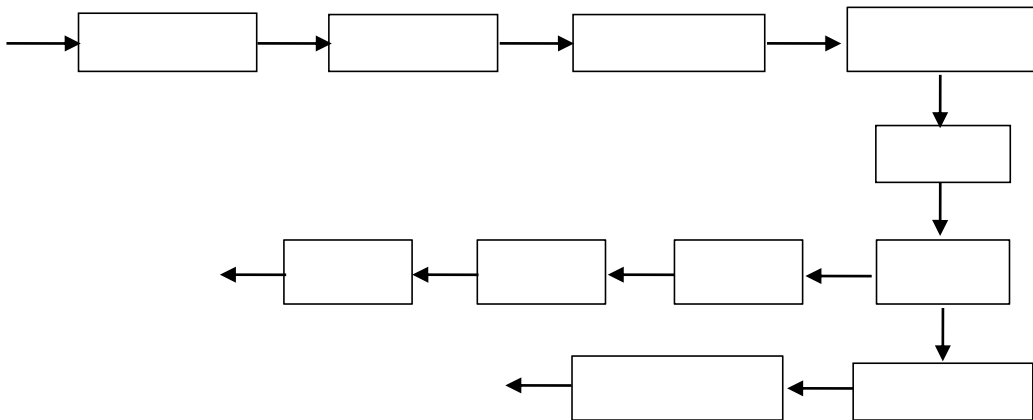
2009 9

2011

5

(18918-2002) 1 A

7-1



(18918-2002) 1 A

(8978-1996) 4 3-

(/ 31962-2015)

/

1.2 /

0.0006%

80 85

12348-2008 3

- 2.4-2009

$$p(r) = L_{p(r_0)} 20 \left(\frac{r}{r_0}\right)$$

$L_{p(r)}$ A A

$L_{p(r_0)}$ 0 A A

0

A

A

$$p(r) = L \cdot 20 \cdot () - 8$$

$$L_{Tp} = 101g \left[\sum_{i=1}^n 10^{0.1Lp_i} \right]$$

7-6

	39.7	65	55
	42.3	65	55
	46.6	65	55
	49.8	65	55

12348-2008 3

1

2

1.325 /

3.08 /

4.5 /

5²

0.14

1

5²

()

(2025)

1

A

2015

18218-2009

/ 169-2004

7-7

2

3

4

.

.

.

97 122

() (1996 463)

1

2

3

4

		11

2

1

2

819-2017

360 /

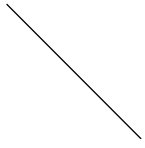
18918-2002

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3-

8-1

		1	
		2	
			3-
		1	





9
1000 3000

2

2011

2011

2015 118

2012

2012

2011

2012

2012

4

3095-2012

2018

8

(3838-2002)

3096-2008 3

5

1

0.0325 /

0.0045 /

16297-1996 2

2

18918-2002 A

3

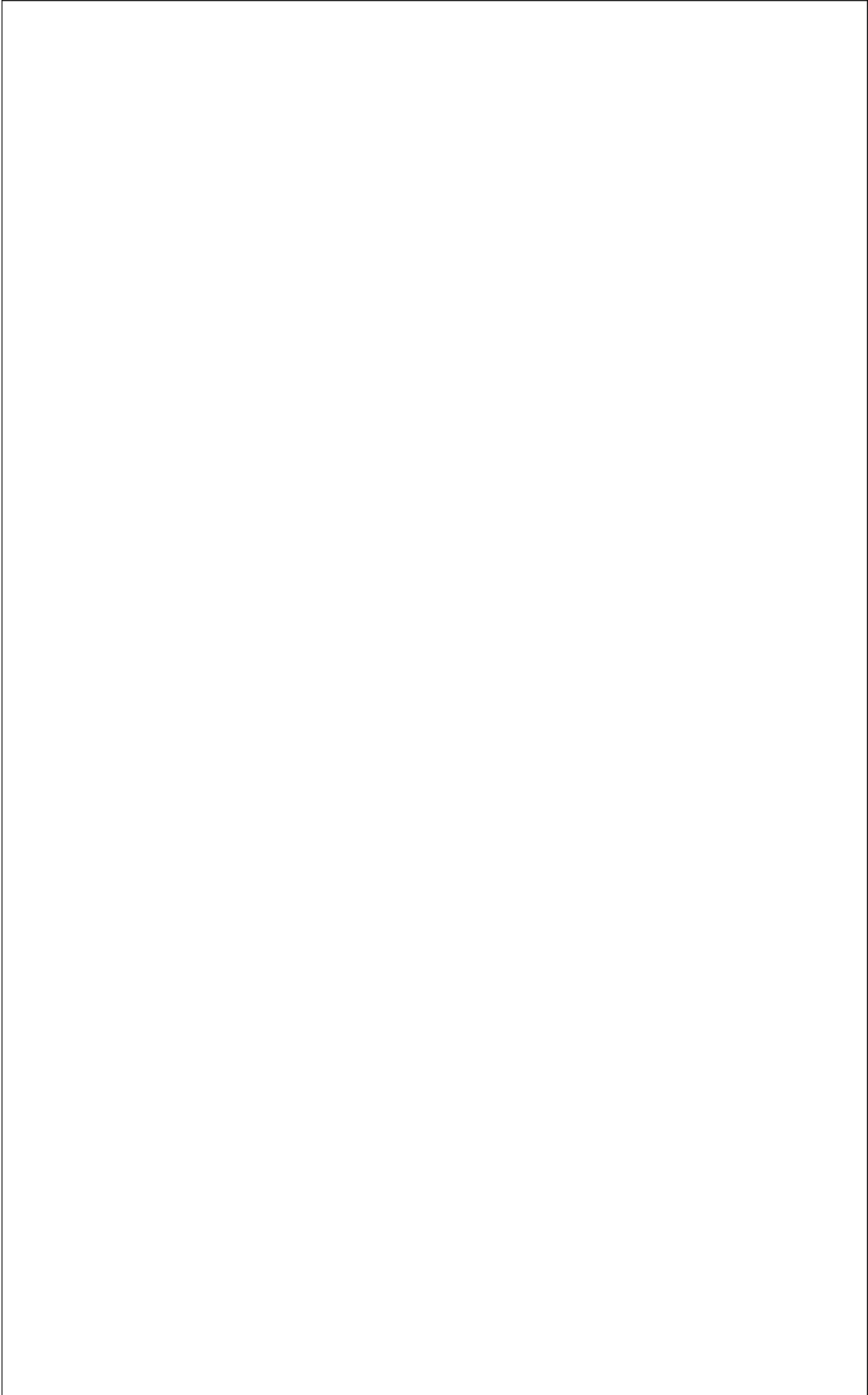
12348-2008 3

4

6

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2



1

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5

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7

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1

2

3

4

5

6

1 2

1

2

3

4

5

6

7