



FOUNDATIONS OF *Coaching*

Training Pace Charts **Table of Contents**

A series of training pace charts for aerobic and endurance categories of training

1. Obtaining Aerobic Training Paces
2. Table # 1: Number of Lengths Completed in a 30 Minute Swim
3. Table # 2: Timed Swim Pace Chart
4. Table # 3a: Pacing Chart for Determining Training Paces During a Distance Swim (Part a)
5. Table # 3b: Pacing Chart for Determining Training Paces During a Distance Swim (Part b)
6. Table # 4: EN-1 Training Paces with 10 Seconds Rest
7. Table # 5: EN-2 Training Paces with 10 Seconds Rest
8. Table # 6: EN-2 Training Paces with 30 Seconds Rest
9. Table # 7: EN-3 Training Paces with 30 Seconds Rest



FOUNDATIONS OF *Coaching*

Obtaining Aerobic Training Paces

by Rick Sharp, PhD

Interval Training and Set Design gives recommendations for appropriate intensities or speeds to use when designing training paces for each category. One of the ways that intensity can be prescribed for the endurance categories is based on threshold speed. The training pace charts included in this handbook for the aerobic or endurance categories (EN1, EN2, EN3) are all based on first knowing the threshold speed for the swimmer. Consequently, the coach who wishes to use the charts presented in this chapter should have a tool for estimating constant threshold speed for each swimmer.

Background on Anaerobic Threshold

Anerobic Threshold or Threshold Training is a physiological term that has been applied to test sets and paces. In 1976, Mader, Heck & Hollman, described a method whereby endurance training speeds could be prescribed based on the individual's blood lactate response to different swimming paces. Mader inferred that speeds corresponding to a blood lactate of four millimolar (4 mM) would provide the best stimulus for improving endurance capacity because faster speeds could not be maintained long enough to provide the appropriate aerobic stimulus, and slower speeds would typically underload the endurance systems. Because measurements of blood lactate were out of reach for most coaches, a considerable amount of work was done to identify simpler, safer, and less expensive ways of prescribing a threshold speed. However, the term Threshold Training, a physiological term, was kept to identify the speed/pace necessary to improve endurance capacity.

T30 or Timed 3,000 Swim

The T30, or 3,000 swim for time, gives the coach a pretty good idea of each athlete's ability to sustain prolonged work. This works if the swimmer puts forth an honest effort; the maximum speed the swimmer can maintain is his or her individual continuous swimming threshold speed.

In 1985 Olbrecht, Madsen, Mader, Liesen, and Hollmann reported the results of a study that was designed to test the validity of various training sets in predicting a swimmer's 4 mM threshold speed. The volunteers for the study were 59 members of the German Men's National team. They were first tested for their 4 mM speed using Mader's two-speed test and were then asked to swim various interval sets, a 30-minute swim as fast as possible, and a 60-minute swim as fast as possible. The major finding of the study was that swimmers chose a pace during their 30-minute swim that was not significantly different from their 4 mM speed. From this finding the authors concluded that the 30-minute swim test could be used to estimate a swimmer's 4 mM threshold speed without the need of blood sampling. Since then, the 30-minute swim test has been referred to as the T30.

To perform this test a swimmer can either do the T30 test exactly as Olbrecht et al. described, swim continuously for 25 to 40 minutes, or swim a timed 3,000 and calculate the average pace per 100 meters or yards.

Instructions for T30

1. Measure the distance the swimmer covers in a 30-minute continuous swim. It must be an honest effort by the swimmer to cover as much distance as possible using an even pace.
2. Use the pacing charts in Table 1 to find the 100 pace corresponding to the distance swum in the T30.

Instructions for Timed 3,000

1. Have the swimmer swim a 3,000 for time (or other distance that will equal approximately 30 minutes) with honest effort and even pace.
2. Use the pacing charts in Tables 2 or 3 to find the 100 pace corresponding to the time for the 3,000 swim.



FOUNDATIONS OF *Coaching*

Training Pace Charts Based on T30

Why are three times given for each training pace prescription?

The standard deviation for the prediction of threshold from a T30 test has been shown to be plus or minus 0.053 meters/second. Therefore, prescribed paces should fall within a range of plus or minus 0.053 meters/second, acknowledging that 68 percent of the population will have a threshold within this range (based on the research). Because swimming speed is more easily prescribed as time for given distances, the 0.053 meters/second standard deviation has been converted to actual times. Thus, each distance has a fast speed (prescribed pace plus 0.053 meters/second), the prescribed pace, and a slower speed (prescribed pace minus 0.053 meters/second) for the swimmer to stay within. The coach should remember that although a range of paces is given, based on the research, this range only covers about 68 percent of the swimmers. Therefore, some swimmers will be able to swim faster than this prescribed range, and some will have to swim slower than the paces given here (see tables 5 and 6). In using these paces, it makes sense to start a set at the slower end of the prescribed range and gradually descend to the faster end of the range. If the swimmer does not seem to be able to hold a pace within the prescribed range for the length of an EN2 set, the coach might conclude that this swimmer is one of those who fall outside of the 68 percent who are covered by the standard deviation. In this case, the swimmer should be allowed to swim somewhat slower than the prescribed range so that EN2 sets can be performed with a constant speed without undue fatigue.

Why are paces for distances shorter than 400 so much faster than the threshold pace?

If the goal is to stay close to a blood lactate level corresponding to that occurring during a long threshold swim (e.g., T30), the previously identified threshold pace must be adjusted for short-duration swims. The shorter the repeats, the faster the pace needs to be to generate an equivalent lactate accumulation as would occur in long swims. In addition, when 30 seconds of rest is used instead of 10 seconds, the adjustments need to be even greater. For example, a swimmer swam a T30 and averaged one minute five seconds per 100 yards. Based on the EN2-10 sec. rest chart, he or she would need to average about one minute three seconds during an EN2 set of 24 x 100 per yards. Averaging a time of one minute five seconds on this set would be physiologically easier than it would be during continuous swimming. Research has also shown that such adjustment is not necessary when repeats are over 400 meters. Thus, in tables 4, 5 and 6 adjustments are made at the shorter distances.

How were the EN1 paces derived?

In theory, any speed slower than threshold speed but still fast enough to create some aerobic adaptations could be used for an EN1 speed. For convenience, the EN1 speeds shown in the EN1 chart in table 4 are simply five percent slower than the EN2-10 seconds speed (with the faster and slower speed based on the standard deviation also included).

How were the EN3 speeds determined?

Again, swimming any speed that is faster than threshold will probably target the correct adaptations one looks for in doing EN3 training *as long as the set is constructed properly*. However, to give coaches an approximate idea of what these speeds usually are, the EN3 speeds shown in the EN3 chart in table 7 were set at a range three percent, five percent, and seven percent faster than the average speed prescribed in table 6 EN2-30 sec rest speed.

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Table 1: Number of lengths completed in a 30-minute swim

Total Yards or Meters	# lengths swum yards	# lengths swum meters	Average Pace Per 100	Total Yards or Meters	# lengths swum yards	# lengths swum meters	Average Pace Per 100
3500	140	70	:51.4	2300	92	46	1:18.3
3475	139	69.5	:51.8	2275	91	45.5	1:19.1
3450	138	69	:52.2	2250	90	45	1:20.0
3425	137	68.5	:52.6	2225	89	44.5	1:20.9
3400	136	68	:52.9	2200	88	44	1:21.8
3375	135	67.5	:53.3	2175	87	43.5	1:22.8
3350	134	67	:53.7	2150	86	43	1:23.7
3325	133	66.5	:54.1	2125	85	42.5	1:24.7
3300	132	66	:54.5	2100	84	42	1:25.7
3275	131	65.5	:55.0	2075	83	41.5	1:26.7
3250	130	65	:55.4	2050	82	41	1:27.8
3225	129	64.5	:55.8	2025	81	40.5	1:28.9
3200	128	64	:56.3	2000	80	40	1:30.0
3175	127	63.5	:56.7	1975	79	39.5	1:31.1
3150	126	63	:57.1	1950	78	39	1:32.3
3125	125	62.5	:57.6	1925	77	38.5	1:33.5
3100	124	62	:58.1	1900	76	38	1:34.7
3075	123	61.5	:58.5	1875	75	37.5	1:36.0
3050	122	61	:59.0	1850	74	37	1:37.3
3025	121	60.5	:59.5	1825	73	36.5	1:38.6
3000	120	60	1:00.0	1800	72	36	1:40.0
2975	119	59.5	1:00.5	1775	71	35.5	1:41.4
2950	118	59	1:01.0	1750	70	35	1:42.9
2925	117	58.5	1:01.5	1725	69	34.5	1:44.3
2900	116	58	1:02.1	1700	68	34	1:45.9
2875	115	57.5	1:02.6	1675	67	33.5	1:47.5
2850	114	57	1:03.2	1650	66	33	1:49.1
2825	113	56.5	1:03.7	1625	65	32.5	1:50.8
2800	112	56	1:04.3	1600	64	32	1:52.5
2775	111	55.5	1:04.9	1575	63	31.5	1:54.3
2750	110	55	1:05.5	1550	62	31	1:56.1
2725	109	54.5	1:06.1	1525	61	30.5	1:58.0
2700	108	54	1:06.7	1500	60	30	2:00.0
2675	107	53.5	1:07.3	1475	59	29.5	2:02.0
2650	106	53	1:07.9	1450	58	29	2:04.1
2625	105	52.5	1:08.6	1425	57	28.5	2:06.3
2600	104	52	1:09.2	1400	56	28	2:08.6
2575	103	51.5	1:09.9	1375	55	27.5	2:10.9
2550	102	51	1:10.6	1350	54	27	2:13.3
2525	101	50.5	1:11.3	1325	53	26.5	2:15.8
2500	100	50	1:12.0	1300	52	26	2:18.5
2475	99	49.5	1:12.7	1275	51	25.5	2:21.2
2450	98	49	1:13.5	1250	50	25	2:24.0
2425	97	48.5	1:14.2	1225	49	24.5	2:26.9
2400	96	48	1:15.0	1200	48	24	2:30.0
2375	95	47.5	1:15.8	1175	47	23.5	2:33.2
2350	94	47	1:16.6	1150	46	23	2:36.5
2325	93	46.5	1:17.4	1125	45	22.5	2:40.0

Table B.2 Timed Swim Pace Chart

100	800	1000	1500	1650	2000	3000	100	800	1000	1500	1650	2000	3000	100	800	1000	1500	1650	2000	3000
0:48.0	06:24	08:00	12:00	13:12	16:00	24:00	1:14.5	09:56	12:25	18:38	20:29	24:50	37:15	1:41.0	13:28	16:50	25:15	27:46	33:40	50:30
0:48.5	06:28	08:05	12:07	13:20	16:10	24:15	1:15.0	10:00	12:30	18:45	20:37	25:00	37:30	1:41.5	13:32	16:55	25:22	27:55	33:50	50:45
0:49.0	06:32	08:10	12:15	13:28	16:20	24:30	1:15.5	10:04	12:35	18:52	20:46	25:10	37:45	1:42.0	13:36	17:00	25:30	28:03	34:00	51:00
0:49.5	06:36	08:15	12:23	13:37	16:30	24:45	1:16.0	10:08	12:40	19:00	20:54	25:20	38:00	1:42.5	13:40	17:05	25:38	28:11	34:10	51:15
0:50.0	06:40	08:20	12:30	13:45	16:40	25:00	1:16.5	10:12	12:45	19:07	21:02	25:30	38:15	1:43.0	13:44	17:10	25:45	28:19	34:20	51:30
0:50.5	06:44	08:25	12:37	13:53	16:50	25:15	1:17.0	10:16	12:50	19:15	21:10	25:40	38:30	1:43.5	13:48	17:15	25:53	28:28	34:30	51:45
0:51.0	06:48	08:30	12:45	14:01	17:00	25:30	1:17.5	10:20	12:55	19:22	21:19	25:50	38:45	1:44.0	13:52	17:20	26:00	28:36	34:40	52:00
0:51.5	06:52	08:35	12:52	14:10	17:10	25:45	1:18.0	10:24	13:00	19:30	21:27	26:00	39:00	1:44.5	13:56	17:25	26:08	28:44	34:50	52:15
0:52.0	06:56	08:40	13:00	14:18	17:20	26:00	1:18.5	10:28	13:05	19:37	21:35	26:10	39:15	1:45.0	14:00	17:30	26:15	28:53	35:00	52:30
0:52.5	07:00	08:45	13:08	14:26	17:30	26:15	1:19.0	10:32	13:10	19:45	21:44	26:20	39:30	1:45.5	14:04	17:35	26:22	29:01	35:10	52:45
0:53.0	07:04	08:50	13:15	14:35	17:40	26:30	1:19.5	10:36	13:15	19:52	21:52	26:30	39:45	1:46.0	14:08	17:40	26:30	29:09	35:20	53:00
0:53.5	07:08	08:55	13:22	14:43	17:50	26:45	1:20.0	10:40	13:20	20:00	22:00	26:40	40:00	1:46.5	14:12	17:45	26:37	29:17	35:30	53:15
0:54.0	07:12	09:00	13:30	14:51	18:00	27:00	1:20.5	10:44	13:25	20:08	22:08	26:50	40:15	1:47.0	14:16	17:50	26:45	29:25	35:40	53:30
0:54.5	07:16	09:05	13:37	14:59	18:10	27:15	1:21.0	10:48	13:30	20:15	22:16	27:00	40:30	1:47.5	14:20	17:55	26:52	29:34	35:50	53:45
0:55.0	07:20	09:10	13:45	15:07	18:20	27:30	1:21.5	10:52	13:35	20:22	22:25	27:10	40:45	1:48.0	14:24	18:00	27:00	29:42	36:00	54:00
0:55.5	07:24	09:15	13:52	15:16	18:30	27:45	1:22.0	10:56	13:40	20:30	22:33	27:20	41:00	1:48.5	14:28	18:05	27:07	29:50	36:10	54:15
0:56.0	07:28	09:20	14:00	15:24	18:40	28:00	1:22.5	11:00	13:45	20:37	22:41	27:30	41:15	1:49.0	14:32	18:10	27:15	29:58	36:20	54:30
0:56.5	07:32	09:25	14:08	15:32	18:50	28:15	1:23.0	11:04	13:50	20:45	22:49	27:40	41:30	1:49.5	14:36	18:15	27:22	30:07	36:30	54:45
0:57.0	07:36	09:30	14:15	15:40	19:00	28:30	1:23.5	11:08	13:55	20:52	22:58	27:50	41:45	1:50.0	14:40	18:20	27:30	30:15	36:40	55:00
0:57.5	07:40	09:35	14:22	15:49	19:10	28:45	1:24.0	11:12	14:00	21:00	23:06	28:00	42:00	1:50.5	14:44	18:25	27:38	30:23	36:50	55:15
0:58.0	07:44	09:40	14:30	15:57	19:20	29:00	1:24.5	11:16	14:05	21:07	23:14	28:10	42:15	1:51.0	14:48	18:30	27:45	30:32	37:00	55:30
0:58.5	07:48	09:45	14:37	16:05	19:30	29:15	1:25.0	11:20	14:10	21:15	23:23	28:20	42:30	1:51.5	14:52	18:35	27:53	30:40	37:10	55:45
0:59.0	07:52	09:50	14:45	16:14	19:40	29:30	1:25.5	11:24	14:15	21:23	23:31	28:30	42:45	1:52.0	14:56	18:40	28:00	30:48	37:20	56:00
0:59.5	07:56	09:55	14:52	16:22	19:50	29:45	1:26.0	11:28	14:20	21:30	23:39	28:40	43:00	1:52.5	15:00	18:45	28:07	30:56	37:30	56:15
1:00.0	08:00	10:00	15:00	16:30	20:00	30:00	1:26.5	11:32	14:25	21:37	23:47	28:50	43:15	1:53.0	15:04	18:50	28:15	31:05	37:40	56:30
1:00.5	08:04	10:05	15:07	16:38	20:10	30:15	1:27.0	11:36	14:30	21:45	23:55	29:00	43:30	1:53.5	15:08	18:55	28:22	31:13	37:50	56:45
1:01.0	08:08	10:10	15:15	16:46	20:20	30:30	1:27.5	11:40	14:35	21:52	24:04	29:10	43:45	1:54.0	15:12	19:00	28:30	31:21	38:00	57:00
1:01.5	08:12	10:15	15:22	16:55	20:30	30:45	1:28.0	11:44	14:40	22:00	24:12	29:20	44:00	1:54.5	15:16	19:05	28:37	31:29	38:10	57:15
1:02.0	08:16	10:20	15:30	17:03	20:40	31:00	1:28.5	11:48	14:45	22:08	24:20	29:30	44:15	1:55.0	15:20	19:10	28:45	31:37	38:20	57:30
1:02.5	08:20	10:25	15:38	17:11	20:50	31:15	1:29.0	11:52	14:50	22:15	24:28	29:40	44:30	1:55.5	15:24	19:15	28:52	31:46	38:30	57:45
1:03.0	08:24	10:30	15:45	17:19	21:00	31:30	1:29.5	11:56	14:55	22:23	24:37	29:50	44:45	1:56.0	15:28	19:20	29:00	31:54	38:40	58:00
1:03.5	08:28	10:35	15:53	17:28	21:10	31:45	1:30.0	12:00	15:00	22:30	24:45	30:00	45:00	1:56.5	15:32	19:25	29:07	32:02	38:50	58:15
1:04.0	08:32	10:40	16:00	17:36	21:20	32:00	1:30.5	12:04	15:05	22:37	24:53	30:10	45:15	1:57.0	15:36	19:30	29:15	32:11	39:00	58:30
1:04.5	08:36	10:45	16:07	17:44	21:30	32:15	1:31.0	12:08	15:10	22:45	25:01	30:20	45:30	1:57.5	15:40	19:35	29:22	32:19	39:10	58:45
1:05.0	08:40	10:50	16:15	17:52	21:40	32:30	1:31.5	12:12	15:15	22:52	25:10	30:30	45:45	1:58.0	15:44	19:40	29:30	32:27	39:20	59:00
1:05.5	08:44	10:55	16:22	18:01	21:50	32:45	1:32.0	12:16	15:20	23:00	25:18	30:40	46:00	1:58.5	15:48	19:45	29:38	32:35	39:30	59:15
1:06.0	08:48	11:00	16:30	18:09	22:00	33:00	1:32.5	12:20	15:25	23:08	25:26	30:50	46:15	1:59.0	15:52	19:50	29:45	32:44	39:40	59:30
1:06.5	08:52	11:05	16:38	18:17	22:10	33:15	1:33.0	12:24	15:30	23:15	25:35	31:00	46:30	1:59.5	15:56	19:55	29:52	32:52	39:50	59:45
1:07.0	08:56	11:10	16:45	18:26	22:20	33:30	1:33.5	12:28	15:35	23:22	25:43	31:10	46:45	2:00.0	16:00	20:00	30:00	33:00	40:00	1:00:00
1:07.5	09:00	11:15	16:52	18:34	22:30	33:45	1:34.0	12:32	15:40	23:30	25:51	31:20	47:00							
1:08.0	09:04	11:20	17:00	18:42	22:40	34:00	1:34.5	12:36	15:45	23:37	25:59	31:30	47:15							
1:08.5	09:08	11:25	17:07	18:50	22:50	34:15	1:35.0	12:40	15:50	23:45	26:08	31:40	47:30							
1:09.0	09:12	11:30	17:15	18:58	23:00	34:30	1:35.5	12:44	15:55	23:52	26:16	31:50	47:45							
1:09.5	09:16	11:35	17:22	19:07	23:10	34:45	1:36.0	12:48	16:00	24:00	26:24	32:00	48:00							
1:10.0	09:20	11:40	17:30	19:15	23:20	35:00	1:36.5	12:52	16:05	24:08	26:32	32:10	48:15							
1:10.5	09:24	11:45	17:38	19:23	23:30	35:15	1:37.0	12:56	16:10	24:15	26:40	32:20	48:30							
1:11.0	09:28	11:50	17:45	19:31	23:40	35:30	1:37.5	13:00	16:15	24:22	26:49	32:30	48:45							
1:11.5	09:32	11:55	17:52	19:40	23:50	35:45	1:38.0	13:04	16:20	24:30	26:57	32:40	49:00							
1:12.0	09:36	12:00	18:00	19:48	24:00	36:00	1:38.5	13:08	16:25	24:37	27:05	32:50	49:15							
1:12.5	09:40	12:05	18:07	19:56	24:10	36:15	1:39.0	13:12	16:30	24:45	27:14	33:00	49:30							
1:13.0	09:44	12:10	18:15	20:05	24:20	36:30	1:39.5	13:16	16:35	24:52	27:22	33:10	49:45							
1:13.5	09:48	12:15	18:23	20:13	24:30	36:45	1:40.0	13:20	16:40	25:00	27:30	33:20	50:00							
1:14.0	09:52	12:20	18:30	20:21	24:40	37:00	1:40.5	13:24	16:45	25:07	27:38	33:30	50:15							

"100" column is the
average pace
per 100

Used to calculate
EN2 or
"Threshold Pace"

Table 3a: Pacing Chart for Determining Training Paces During a Distance Swim

100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1650
0:48	01:36	02:24	03:12	04:00	04:48	05:36	06:24	07:12	08:00	08:48	09:36	10:24	11:12	12:00	12:48	13:12
0:49	01:38	02:27	03:16	04:05	04:54	05:43	06:32	07:21	08:10	08:59	09:48	10:37	11:26	12:15	13:04	13:28.5
0:50	01:40	02:30	03:20	04:10	05:00	05:50	06:40	07:30	08:20	09:10	10:00	10:50	11:40	12:30	13:20	13:45
0:51	01:42	02:33	03:24	04:15	05:06	05:57	06:48	07:39	08:30	09:21	10:12	11:03	11:54	12:45	13:36	14:01.5
0:52	01:44	02:36	03:28	04:20	05:12	06:04	06:56	07:48	08:40	09:32	10:24	11:16	12:08	13:00	13:52	14:18
0:53	01:46	02:39	03:32	04:25	05:18	06:11	07:04	07:57	08:50	09:43	10:36	11:29	12:22	13:15	14:08	14:34.5
0:54	01:48	02:42	03:36	04:30	05:24	06:18	07:12	08:06	09:00	09:54	10:48	11:42	12:36	13:30	14:24	14:51
0:55	01:50	02:45	03:40	04:35	05:30	06:25	07:20	08:15	09:10	10:05	11:00	11:55	12:50	13:45	14:40	15:07.5
0:56	01:52	02:48	03:44	04:40	05:36	06:32	07:28	08:24	09:20	10:16	11:12	12:08	13:04	14:00	14:56	15:24
0:57	01:54	02:51	03:48	04:45	05:42	06:39	07:36	08:33	09:30	10:27	11:24	12:21	13:18	14:15	15:12	15:40.5
0:58	01:56	02:54	03:52	04:50	05:48	06:46	07:44	08:42	09:40	10:38	11:36	12:34	13:32	14:30	15:28	15:57
0:59	01:58	02:57	03:56	04:55	05:54	06:53	07:52	08:51	09:50	10:49	11:48	12:47	13:46	14:45	15:44	16:13.5
1:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	16:30
1:01	02:02	03:03	04:04	05:05	06:06	07:07	08:08	09:09	10:10	11:11	12:12	13:13	14:14	15:15	16:16	16:46.5
1:02	02:04	03:06	04:08	05:10	06:12	07:14	08:16	09:18	10:20	11:22	12:24	13:26	14:28	15:30	16:32	17:03
1:03	02:06	03:09	04:12	05:15	06:18	07:21	08:24	09:27	10:30	11:33	12:36	13:39	14:42	15:45	16:48	17:19.5
1:04	02:08	03:12	04:16	05:20	06:24	07:28	08:32	09:36	10:40	11:44	12:48	13:52	14:56	16:00	17:04	17:36
1:05	02:10	03:15	04:20	05:25	06:30	07:35	08:40	09:45	10:50	11:55	13:00	14:05	15:10	16:15	17:20	17:52.5
1:06	02:12	03:18	04:24	05:30	06:36	07:42	08:48	09:54	11:00	12:06	13:12	14:18	15:24	16:30	17:36	18:09
1:07	02:14	03:21	04:28	05:35	06:42	07:49	08:56	10:03	11:10	12:17	13:24	14:31	15:38	16:45	17:52	18:25.5
1:08	02:16	03:24	04:32	05:40	06:48	07:56	09:04	10:12	11:20	12:28	13:36	14:44	15:52	17:00	18:08	18:42
1:09	02:18	03:27	04:36	05:45	06:54	08:03	09:12	10:21	11:30	12:39	13:48	14:57	16:06	17:15	18:24	18:58.5
1:10	02:20	03:30	04:40	05:50	07:00	08:10	09:20	10:30	11:40	12:50	14:00	15:10	16:20	17:30	18:40	19:15
1:11	02:22	03:33	04:44	05:55	07:06	08:17	09:28	10:39	11:50	13:01	14:12	15:23	16:34	17:45	18:56	19:31.5
1:12	02:24	03:36	04:48	06:00	07:12	08:24	09:36	10:48	12:00	13:12	14:24	15:36	16:48	18:00	19:12	19:48
1:13	02:26	03:39	04:52	06:05	07:18	08:31	09:44	10:57	12:10	13:23	14:36	15:49	17:02	18:15	19:28	20:04.5
1:14	02:28	03:42	04:56	06:10	07:24	08:38	09:52	11:06	12:20	13:34	14:48	16:02	17:16	18:30	19:44	20:21
1:15	02:30	03:45	05:00	06:15	07:30	08:45	10:00	11:15	12:30	13:45	15:00	16:15	17:30	18:45	20:00	20:37.5
1:16	02:32	03:48	05:04	06:20	07:36	08:52	10:08	11:24	12:40	13:56	15:12	16:28	17:44	19:00	20:16	20:54
1:17	02:34	03:51	05:08	06:25	07:42	08:59	10:16	11:33	12:50	14:07	15:24	16:41	17:58	19:15	20:32	21:10.5
1:18	02:36	03:54	05:12	06:30	07:48	09:06	10:24	11:42	13:00	14:18	15:36	16:54	18:12	19:30	20:48	21:27
1:19	02:38	03:57	05:16	06:35	07:54	09:13	10:32	11:51	13:10	14:29	15:48	17:07	18:26	19:45	21:04	21:43.5
1:20	02:40	04:00	05:20	06:40	08:00	09:20	10:40	12:00	13:20	14:40	16:00	17:20	18:40	20:00	21:20	22:00
1:21	02:42	04:03	05:24	06:45	08:06	09:27	10:48	12:09	13:30	14:51	16:12	17:33	18:54	20:15	21:36	22:16.5
1:22	02:44	04:06	05:28	06:50	08:12	09:34	10:56	12:18	13:40	15:02	16:24	17:46	19:08	20:30	21:52	22:33
1:23	02:46	04:09	05:32	06:55	08:18	09:41	11:04	12:27	13:50	15:13	16:36	17:59	19:22	20:45	22:08	22:49.5
1:24	02:48	04:12	05:36	07:00	08:24	09:48	11:12	12:36	14:00	15:24	16:48	18:12	19:36	21:00	22:24	23:06
1:25	02:50	04:15	05:40	07:05	08:30	09:55	11:20	12:45	14:10	15:35	17:00	18:25	19:50	21:15	22:40	23:22.5
1:26	02:52	04:18	05:44	07:10	08:36	10:02	11:28	12:54	14:20	15:46	17:12	18:38	20:04	21:30	22:56	23:39
1:27	02:54	04:21	05:48	07:15	08:42	10:09	11:36	13:03	14:30	15:57	17:24	18:51	20:18	21:45	23:12	23:55.5
1:28	02:56	04:24	05:52	07:20	08:48	10:16	11:44	13:12	14:40	16:08	17:36	19:04	20:32	22:00	23:28	24:12
1:29	02:58	04:27	05:56	07:25	08:54	10:23	11:52	13:21	14:50	16:19	17:48	19:17	20:46	22:15	23:44	24:28.5
1:30	03:00	04:30	06:00	07:30	09:00	10:30	12:00	13:30	15:00	16:30	18:00	19:30	21:00	22:30	24:00	24:45
1:31	03:02	04:33	06:04	07:35	09:06	10:37	12:08	13:39	15:10	16:41	18:12	19:43	21:14	22:45	24:16	25:01.5
1:32	03:04	04:36	06:08	07:40	09:12	10:44	12:16	13:48	15:20	16:52	18:24	19:56	21:28	23:00	24:32	25:18
1:33	03:06	04:39	06:12	07:45	09:18	10:51	12:24	13:57	15:30	17:03	18:36	20:09	21:42	23:15	24:48	25:34.5
1:34	03:08	04:42	06:16	07:50	09:24	10:58	12:32	14:06	15:40	17:14	18:48	20:22	21:56	23:30	25:04	25:51
1:35	03:10	04:45	06:20	07:55	09:30	11:05	12:40	14:15	15:50	17:25	19:00	20:35	22:10	23:45	25:20	26:07.5
1:36	03:12	04:48	06:24	08:00	09:36	11:12	12:48	14:24	16:00	17:36	19:12	20:48	22:24	24:00	25:36	26:24
1:37	03:14	04:51	06:28	08:05	09:42	11:19	12:56	14:33	16:10	17:47	19:24	21:01	22:38	24:15	25:52	26:40.5
1:38	03:16	04:54	06:32	08:10	09:48	11:26	13:04	14:42	16:20	17:58	19:36	21:14	22:52	24:30	26:08	26:57
1:39	03:18	04:57	06:36	08:15	09:54	11:33	13:12	14:51	16:30	18:09	19:48	21:27	23:06	24:45	26:24	27:13.5
1:40	03:20	05:00	06:40	08:20	10:00	11:40	13:20	15:00	16:40	18:20	20:00	21:40	23:20	25:00	26:40	27:30

Table 3b: Pacing Chart for Determining Training Paces During a Distance Swim

100	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200
0:48	13:36	14:24	15:12	16:00	16:48	17:36	18:24	19:12	20:00	20:48	21:36	22:24	23:12	24:00	24:48	25:36
0:49	13:53	14:42	15:31	16:20	17:09	17:58	18:47	19:36	20:25	21:14	22:03	22:52	23:41	24:30	25:19	26:08
0:50	14:10	15:00	15:50	16:40	17:30	18:20	19:10	20:00	20:50	21:40	22:30	23:20	24:10	25:00	25:50	26:40
0:51	14:27	15:18	16:09	17:00	17:51	18:42	19:33	20:24	21:15	22:06	22:57	23:48	24:39	25:30	26:21	27:12
0:52	14:44	15:36	16:28	17:20	18:12	19:04	19:56	20:48	21:40	22:32	23:24	24:16	25:08	26:00	26:52	27:44
0:53	15:01	15:54	16:47	17:40	18:33	19:26	20:19	21:12	22:05	22:58	23:51	24:44	25:37	26:30	27:23	28:16
0:54	15:18	16:12	17:06	18:00	18:54	19:48	20:42	21:36	22:30	23:24	24:18	25:12	26:06	27:00	27:54	28:48
0:55	15:35	16:30	17:25	18:20	19:15	20:10	21:05	22:00	22:55	23:50	24:45	25:40	26:35	27:30	28:25	29:20
0:56	15:52	16:48	17:44	18:40	19:36	20:32	21:28	22:24	23:20	24:16	25:12	26:08	27:04	28:00	28:56	29:52
0:57	16:09	17:06	18:03	19:00	19:57	20:54	21:51	22:48	23:45	24:42	25:39	26:36	27:33	28:30	29:27	30:24
0:58	16:26	17:24	18:22	19:20	20:18	21:16	22:14	23:12	24:10	25:08	26:06	27:04	28:02	29:00	29:58	30:56
0:59	16:43	17:42	18:41	19:40	20:39	21:38	22:37	23:36	24:35	25:34	26:33	27:32	28:31	29:30	30:29	31:28
1:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	25:00	26:00	27:00	28:00	29:00	30:00	31:00	32:00
1:01	17:17	18:18	19:19	20:20	21:21	22:22	23:23	24:24	25:25	26:26	27:27	28:28	29:29	30:30	31:31	32:32
1:02	17:34	18:36	19:38	20:40	21:42	22:44	23:46	24:48	25:50	26:52	27:54	28:56	29:58	31:00	32:02	33:04
1:03	17:51	18:54	19:57	21:00	22:03	23:06	24:09	25:12	26:15	27:18	28:21	29:24	30:27	31:30	32:33	33:36
1:04	18:08	19:12	20:16	21:20	22:24	23:28	24:32	25:36	26:40	27:44	28:48	29:52	30:56	32:00	33:04	34:08
1:05	18:25	19:30	20:35	21:40	22:45	23:50	24:55	26:00	27:05	28:10	29:15	30:20	31:25	32:30	33:35	34:40
1:06	18:42	19:48	20:54	22:00	23:06	24:12	25:18	26:24	27:30	28:36	29:42	30:48	31:54	33:00	34:06	35:12
1:07	18:59	20:06	21:13	22:20	23:27	24:34	25:41	26:48	27:55	29:02	30:09	31:16	32:23	33:30	34:37	35:44
1:08	19:16	20:24	21:32	22:40	23:48	24:56	26:04	27:12	28:20	29:28	30:36	31:44	32:52	34:00	35:08	36:16
1:09	19:33	20:42	21:51	23:00	24:09	25:18	26:27	27:36	28:45	29:54	31:03	32:12	33:21	34:30	35:39	36:48
1:10	19:50	21:00	22:10	23:20	24:30	25:40	26:50	28:00	29:10	30:20	31:30	32:40	33:50	35:00	36:10	37:20
1:11	20:07	21:18	22:29	23:40	24:51	26:02	27:13	28:24	29:35	30:46	31:57	33:08	34:19	35:30	36:41	37:52
1:12	20:24	21:36	22:48	24:00	25:12	26:24	27:36	28:48	30:00	31:12	32:24	33:36	34:48	36:00	37:12	38:24
1:13	20:41	21:54	23:07	24:20	25:33	26:46	27:59	29:12	30:25	31:38	32:51	34:04	35:17	36:30	37:43	38:56
1:14	20:58	22:12	23:26	24:40	25:54	27:08	28:22	29:36	30:50	32:04	33:18	34:32	35:46	37:00	38:14	39:28
1:15	21:15	22:30	23:45	25:00	26:15	27:30	28:45	30:00	31:15	32:30	33:45	35:00	36:15	37:30	38:45	40:00
1:16	21:32	22:48	24:04	25:20	26:36	27:52	29:08	30:24	31:40	32:56	34:12	35:28	36:44	38:00	39:16	40:32
1:17	21:49	23:06	24:23	25:40	26:57	28:14	29:31	30:48	32:05	33:22	34:39	35:56	37:13	38:30	39:47	41:04
1:18	22:06	23:24	24:42	26:00	27:18	28:36	29:54	31:12	32:30	33:48	35:06	36:24	37:42	39:00	40:18	41:36
1:19	22:23	23:42	25:01	26:20	27:39	28:58	30:17	31:36	32:55	34:14	35:33	36:52	38:11	39:30	40:49	42:08
1:20	22:40	24:00	25:20	26:40	28:00	29:20	30:40	32:00	33:20	34:40	36:00	37:20	38:40	40:00	41:20	42:40
1:21	22:57	24:18	25:39	27:00	28:21	29:42	31:03	32:24	33:45	35:06	36:27	37:48	39:09	40:30	41:51	43:12
1:22	23:14	24:36	25:58	27:20	28:42	30:04	31:26	32:48	34:10	35:32	36:54	38:16	39:38	41:00	42:22	43:44
1:23	23:31	24:54	26:17	27:40	29:03	30:26	31:49	33:12	34:35	35:58	37:21	38:44	40:07	41:30	42:53	44:16
1:24	23:48	25:12	26:36	28:00	29:24	30:48	32:12	33:36	35:00	36:24	37:48	39:12	40:36	42:00	43:24	44:48
1:25	24:05	25:30	26:55	28:20	29:45	31:10	32:35	34:00	35:25	36:50	38:15	39:40	41:05	42:30	43:55	45:20
1:26	24:22	25:48	27:14	28:40	30:06	31:32	32:58	34:24	35:50	37:16	38:42	40:08	41:34	43:00	44:26	45:52
1:27	24:39	26:06	27:33	29:00	30:27	31:54	33:21	34:48	36:15	37:42	39:09	40:36	42:03	43:30	44:57	46:24
1:28	24:56	26:24	27:52	29:20	30:48	32:16	33:44	35:12	36:40	38:08	39:36	41:04	42:32	44:00	45:28	46:56
1:29	25:13	26:42	28:11	29:40	31:09	32:38	34:07	35:36	37:05	38:34	40:03	41:32	43:01	44:30	45:59	47:28
1:30	25:30	27:00	28:30	30:00	31:30	33:00	34:30	36:00	37:30	39:00	40:30	42:00	43:30	45:00	46:30	48:00
1:31	25:47	27:18	28:49	30:20	31:51	33:22	34:53	36:24	37:55	39:26	40:57	42:28	43:59	45:30	47:01	48:32
1:32	26:04	27:36	29:08	30:40	32:12	33:44	35:16	36:48	38:20	39:52	41:24	42:56	44:28	46:00	47:32	49:04
1:33	26:21	27:54	29:27	31:00	32:33	34:06	35:39	37:12	38:45	40:18	41:51	43:24	44:57	46:30	48:03	49:36
1:34	26:38	28:12	29:46	31:20	32:54	34:28	36:02	37:36	39:10	40:44	42:18	43:52	45:26	47:00	48:34	50:08
1:35	26:55	28:30	30:05	31:40	33:15	34:50	36:25	38:00	39:35	41:10	42:45	44:20	45:55	47:30	49:05	50:40
1:36	27:12	28:48	30:24	32:00	33:36	35:12	36:48	38:24	40:00	41:36	43:12	44:48	46:24	48:00	49:36	51:12
1:37	27:29	29:06	30:43	32:20	33:57	35:34	37:11	38:48	40:25	42:02	43:39	45:16	46:53	48:30	50:07	51:44
1:38	27:46	29:24	31:02	32:40	34:18	35:56	37:34	39:12	40:50	42:28	44:06	45:44	47:22	49:00	50:38	52:16
1:39	28:03	29:42	31:21	33:00	34:39	36:18	37:57	39:36	41:15	42:54	44:33	46:12	47:51	49:30	51:09	52:48
1:40	28:20	30:00	31:40	33:20	35:00	36:40	38:20	40:00	41:40	43:20	45:00	46:40	48:20	50:00	51:40	53:20

Table 4 EN1 Training Paces (with 10 seconds rest)

Threshold	Repeat Distance									Threshold	Repeat Distance								
	25	50	75	100	150	200	300	400	500		25	50	75	100	150	200	300	400	500
0:55	0:13	0:26	0:40	0:54	1:22	1:51	2:47	3:44	4:41	1:21	0:18	0:37	0:58	1:19	2:00	2:41	4:03	5:26	6:48
	0:13	0:26	0:41	0:56	1:25	1:54	2:52	3:51	4:49		0:19	0:39	1:00	1:23	2:05	2:48	4:13	5:40	7:05
	0:13	0:27	0:42	0:58	1:27	1:57	2:57	3:58	4:57		0:20	0:41	1:03	1:26	2:10	2:55	4:25	5:55	7:24
0:56	0:13	0:26	0:40	0:55	1:24	1:53	2:50	3:48	4:46	1:22	0:18	0:38	0:58	1:20	2:01	2:43	4:06	5:30	6:53
	0:13	0:27	0:42	0:57	1:26	1:56	2:55	3:55	4:54		0:19	0:39	1:01	1:24	2:06	2:50	4:16	5:44	7:11
	0:14	0:28	0:43	0:59	1:29	1:59	3:00	4:02	5:03		0:20	0:41	1:04	1:27	2:12	2:57	4:28	6:00	7:30
0:57	0:13	0:27	0:41	0:56	1:25	1:54	2:53	3:52	4:50	1:23	0:19	0:38	0:59	1:21	2:02	2:44	4:09	5:34	6:57
	0:13	0:27	0:42	0:58	1:28	1:58	2:58	3:59	4:59		0:19	0:40	1:02	1:25	2:08	2:52	4:20	5:49	7:16
	0:14	0:28	0:44	1:00	1:31	2:02	3:04	4:07	5:09		0:20	0:42	1:05	1:29	2:14	3:00	4:31	6:05	7:36
0:58	0:13	0:27	0:42	0:57	1:27	1:56	2:56	3:56	4:55	1:24	0:19	0:39	1:00	1:22	2:04	2:46	4:11	5:38	7:02
	0:14	0:28	0:43	0:59	1:29	2:00	3:01	4:04	5:05		0:20	0:40	1:02	1:26	2:09	2:54	4:23	5:53	7:21
	0:14	0:29	0:44	1:01	1:32	2:04	3:07	4:11	5:14		0:21	0:42	1:05	1:30	2:15	3:02	4:35	6:09	7:42
0:59	0:13	0:28	0:43	0:58	1:28	1:58	2:59	4:00	5:00	1:25	0:19	0:39	1:00	1:23	2:05	2:48	4:14	5:42	7:07
	0:14	0:28	0:44	1:00	1:31	2:02	3:04	4:08	5:10		0:20	0:41	1:03	1:27	2:11	2:56	4:26	5:57	7:26
	0:14	0:29	0:45	1:02	1:34	2:06	3:10	4:16	5:20		0:21	0:43	1:06	1:31	2:17	3:04	4:38	6:14	7:47
1:00	0:14	0:28	0:43	0:59	1:30	2:00	3:02	4:04	5:05	1:26	0:19	0:40	1:01	1:24	2:07	2:50	4:17	5:45	7:12
	0:14	0:29	0:45	1:01	1:32	2:04	3:08	4:12	5:15		0:20	0:41	1:04	1:28	2:12	2:58	4:29	6:01	7:32
	0:15	0:30	0:46	1:03	1:35	2:08	3:14	4:20	5:25		0:21	0:43	1:07	1:32	2:19	3:06	4:42	6:18	7:53
1:01	0:14	0:28	0:44	1:00	1:31	2:02	3:05	4:08	5:10	1:27	0:19	0:40	1:02	1:25	2:08	2:52	4:20	5:49	7:17
	0:14	0:29	0:45	1:02	1:34	2:06	3:11	4:16	5:20		0:20	0:42	1:05	1:29	2:14	3:00	4:32	6:05	7:37
	0:15	0:30	0:47	1:04	1:37	2:10	3:17	4:25	5:31		0:21	0:44	1:08	1:33	2:20	3:09	4:45	6:23	7:59
1:02	0:14	0:29	0:45	1:01	1:32	2:04	3:08	4:12	5:15	1:28	0:20	0:40	1:02	1:26	2:10	2:54	4:23	5:53	7:21
	0:15	0:30	0:46	1:03	1:36	2:08	3:14	4:20	5:26		0:21	0:42	1:05	1:30	2:16	3:02	4:35	6:10	7:42
	0:15	0:31	0:48	1:05	1:39	2:13	3:20	4:29	5:37		0:22	0:44	1:09	1:34	2:22	3:11	4:49	6:28	8:05
1:03	0:14	0:29	0:45	1:02	1:34	2:06	3:11	4:16	5:20	1:29	0:20	0:41	1:03	1:27	2:11	2:56	4:26	5:57	7:26
	0:15	0:30	0:47	1:04	1:37	2:10	3:17	4:25	5:31		0:21	0:43	1:06	1:31	2:17	3:04	4:38	6:14	7:47
	0:15	0:31	0:48	1:06	1:40	2:15	3:24	4:34	5:42		0:22	0:45	1:09	1:35	2:24	3:13	4:52	6:32	8:10
1:04	0:15	0:30	0:46	1:03	1:35	2:08	3:14	4:20	5:25	1:30	0:20	0:41	1:04	1:28	2:12	2:58	4:29	6:01	7:31
	0:15	0:31	0:48	1:05	1:39	2:12	3:20	4:29	5:36		0:21	0:43	1:07	1:32	2:19	3:06	4:41	6:18	7:53
	0:16	0:32	0:49	1:08	1:42	2:17	3:27	4:38	5:48		0:22	0:46	1:10	1:36	2:26	3:16	4:55	6:37	8:16
1:05	0:15	0:30	0:47	1:04	1:37	2:10	3:16	4:24	5:30	1:31	0:20	0:42	1:04	1:28	2:14	3:00	4:31	6:05	7:36
	0:15	0:31	0:48	1:06	1:40	2:14	3:23	4:33	5:41		0:21	0:44	1:08	1:33	2:20	3:08	4:45	6:22	7:58
	0:16	0:32	0:50	1:09	1:44	2:19	3:30	4:43	5:53		0:22	0:46	1:11	1:37	2:27	3:18	4:59	6:42	8:22
1:06	0:15	0:31	0:47	1:05	1:38	2:12	3:19	4:28	5:35	1:32	0:21	0:42	1:05	1:29	2:15	3:01	4:34	6:08	7:41
	0:15	0:32	0:49	1:07	1:42	2:17	3:26	4:37	5:47		0:22	0:44	1:08	1:34	2:22	3:10	4:48	6:26	8:03
	0:16	0:33	0:51	1:10	1:45	2:22	3:34	4:47	5:59		0:23	0:47	1:12	1:39	2:29	3:20	5:02	6:46	8:28
1:07	0:15	0:31	0:48	1:06	1:40	2:14	3:22	4:32	5:40	1:33	0:21	0:43	1:06	1:30	2:17	3:03	4:37	6:12	7:45
	0:16	0:32	0:50	1:08	1:43	2:19	3:29	4:41	5:52		0:22	0:45	1:09	1:35	2:23	3:12	4:51	6:31	8:08
	0:16	0:33	0:52	1:11	1:47	2:24	3:37	4:52	6:05		0:23	0:47	1:13	1:40	2:31	3:22	5:06	6:51	8:34
1:08	0:15	0:32	0:49	1:07	1:41	2:16	3:25	4:36	5:45	1:34	0:21	0:43	1:07	1:31	2:18	3:05	4:40	6:16	7:50
	0:16	0:33	0:51	1:09	1:45	2:21	3:33	4:46	5:57		0:22	0:45	1:10	1:36	2:25	3:14	4:54	6:35	8:14
	0:17	0:34	0:52	1:12	1:49	2:26	3:41	4:56	6:10		0:23	0:48	1:13	1:41	2:32	3:25	5:09	6:56	8:39
1:09	0:16	0:32	0:49	1:08	1:43	2:18	3:28	4:40	5:49	1:35	0:21	0:44	1:07	1:32	2:19	3:07	4:43	6:20	7:55
	0:16	0:33	0:51	1:10	1:46	2:23	3:36	4:50	6:02		0:22	0:46	1:11	1:37	2:26	3:17	4:57	6:39	8:19
	0:17	0:34	0:53	1:13	1:50	2:28	3:44	5:01	6:16		0:23	0:48	1:14	1:42	2:34	3:27	5:13	7:00	8:45
1:10	0:16	0:33	0:50	1:09	1:44	2:20	3:31	4:43	5:54	1:36	0:21	0:44	1:08	1:33	2:21	3:09	4:46	6:24	8:00
	0:16	0:34	0:52	1:11	1:48	2:25	3:39	4:54	6:08		0:23	0:46	1:11	1:38	2:28	3:19	5:00	6:43	8:24
	0:17	0:35	0:54	1:14	1:52	2:30	3:47	5:05	6:22		0:24	0:49	1:15	1:43	2:36	3:29	5:16	7:05	8:51
1:11	0:16	0:33	0:51	1:10	1:45	2:22	3:34	4:47	5:59	1:37	0:22	0:44	1:09	1:34	2:22	3:11	4:48	6:27	8:04
	0:17	0:34	0:53	1:12	1:49	2:27	3:42	4:58	6:13		0:23	0:47	1:12	1:39	2:29	3:21	5:03	6:47	8:29
	0:17	0:36	0:55	1:15	1:54	2:33	3:51	5:10	6:27		0:24	0:49	1:16	1:44	2:38	3:32	5:20	7:09	8:57
1:12	0:16	0:33	0:52	1:11	1:47	2:23	3:37	4:51	6:04	1:38	0:22	0:45	1:09	1:35	2:24	3:13	4:51	6:31	8:09
	0:17	0:35	0:53	1:13	1:51	2:29	3:45	5:02	6:18		0:23	0:47	1:13	1:40	2:31	3:23	5:06	6:52	8:35
	0:18	0:36	0:56	1:16	1:55	2:35	3:54	5:14	6:33		0:24	0:50	1:17	1:45	2:39	3:34	5:23	7:14	9:03
1:13	0:16	0:34	0:52	1:12	1:48	2:25	3:40	4:55	6:09	1:39	0:22	0:45	1:10	1:36	2:25	3:15	4:54	6:35	8:14
	0:17	0:35	0:54	1:14	1:52	2:31	3:48	5:07	6:23		0:23	0:48	1:14	1:41	2:32	3:25	5:10	6:56	8:40
	0:18	0:37	0:56	1:17	1:57	2:37	3:57	5:19	6:39		0:24	0:50	1:18	1:47	2:41	3:36	5:27	7:19	9:09
1:14	0:17	0:34	0:53	1:13	1:50	2:27	3:43	4:59	6:14	1:40	0:22	0:46	1:11	1:37	2:26	3:16	4:57	6:39	8:19
	0:17	0:36	0:55	1:15	1:54	2:33	3:51	5:11	6:29		0:23	0:48	1:14	1:42	2:34	3:27	5:13	7:00	8:45
	0:18	0:37	0:57	1:19	1:59	2:39	4:01	5:23	6:44		0:25	0:51	1:18	1:48	2:43	3:38	5:30	7:24	9:14
1:15	0:17	0:35	0:54	1:14	1:51	2:29	3:4												

Table 5 EN2 Training Paces (with 10 seconds rest)

Threshold	Repeat Distance								Threshold	Repeat Distance							
	50	75	100	150	200	300	400	500		50	75	100	150	200	300	400	500
0:55	0:25	0:38	0:52	1:18	1:45	2:39	3:34	4:27	1:21	0:36	0:55	1:15	1:54	2:33	3:51	5:11	6:28
	0:25	0:39	0:53	1:21	1:48	2:44	3:40	4:35		0:37	0:57	1:19	1:59	2:40	4:01	5:24	6:45
	0:26	0:40	0:55	1:23	1:52	2:49	3:47	4:43		0:39	1:00	1:22	2:04	2:47	4:12	5:39	7:03
0:56	0:25	0:38	0:53	1:20	1:47	2:42	3:38	4:32	1:22	0:36	0:56	1:16	1:55	2:35	3:54	5:14	6:33
	0:26	0:40	0:54	1:22	1:50	2:47	3:44	4:40		0:38	0:58	1:20	2:00	2:42	4:04	5:28	6:50
	0:26	0:41	0:56	1:25	1:54	2:52	3:51	4:49		0:39	1:01	1:23	2:06	2:49	4:15	5:43	7:09
0:57	0:25	0:39	0:54	1:21	1:49	2:45	3:41	4:37	1:23	0:36	0:56	1:17	1:57	2:37	3:57	5:18	6:38
	0:26	0:40	0:55	1:24	1:52	2:50	3:48	4:45		0:38	0:59	1:21	2:02	2:44	4:07	5:32	6:55
	0:27	0:42	0:57	1:26	1:56	2:55	3:55	4:54		0:40	1:01	1:24	2:07	2:51	4:19	5:47	7:14
0:58	0:26	0:40	0:55	1:23	1:51	2:48	3:45	4:41	1:24	0:37	0:57	1:18	1:58	2:38	3:59	5:22	6:42
	0:27	0:41	0:56	1:25	1:54	2:53	3:52	4:50		0:39	0:59	1:22	2:03	2:46	4:10	5:36	7:00
	0:27	0:42	0:58	1:28	1:58	2:58	3:59	4:59		0:40	1:02	1:25	2:09	2:53	4:22	5:52	7:20
0:59	0:26	0:40	0:56	1:24	1:53	2:50	3:49	4:46	1:25	0:37	0:58	1:19	1:59	2:40	4:02	5:25	6:47
	0:27	0:42	0:57	1:27	1:56	2:56	3:56	4:55		0:39	1:00	1:23	2:05	2:47	4:13	5:40	7:05
	0:28	0:43	0:59	1:29	2:00	3:01	4:04	5:05		0:41	1:03	1:26	2:11	2:55	4:25	5:56	7:25
1:00	0:27	0:41	0:56	1:25	1:55	2:53	3:53	4:51	1:26	0:38	0:58	1:20	2:01	2:42	4:05	5:29	6:51
	0:28	0:42	0:58	1:28	1:58	2:59	4:00	5:00		0:39	1:01	1:23	2:06	2:49	4:16	5:44	7:10
	0:28	0:44	1:00	1:31	2:02	3:05	4:08	5:10		0:41	1:04	1:27	2:12	2:58	4:28	6:00	7:31
1:01	0:27	0:42	0:57	1:27	1:56	2:56	3:56	4:55	1:27	0:38	0:59	1:21	2:02	2:44	4:08	5:33	6:56
	0:28	0:43	0:59	1:29	2:00	3:02	4:04	5:05		0:40	1:02	1:24	2:08	2:51	4:19	5:48	7:15
	0:29	0:45	1:01	1:32	2:04	3:08	4:12	5:15		0:42	1:05	1:29	2:14	3:00	4:32	6:05	7:36
1:02	0:28	0:42	0:58	1:28	1:58	2:59	4:00	5:00	1:28	0:39	0:59	1:22	2:03	2:46	4:10	5:36	7:00
	0:28	0:44	1:00	1:31	2:02	3:05	4:08	5:10		0:40	1:02	1:25	2:09	2:53	4:22	5:52	7:20
	0:29	0:45	1:02	1:34	2:06	3:11	4:16	5:21		0:42	1:05	1:30	2:15	3:02	4:35	6:09	7:42
1:03	0:28	0:43	0:59	1:29	2:00	3:02	4:04	5:05	1:29	0:39	1:00	1:23	2:05	2:47	4:13	5:40	7:05
	0:29	0:45	1:01	1:32	2:04	3:08	4:12	5:15		0:41	1:03	1:26	2:11	2:55	4:25	5:56	7:25
	0:30	0:46	1:03	1:36	2:08	3:14	4:21	5:26		0:43	1:06	1:31	2:17	3:04	4:38	6:14	7:47
1:04	0:28	0:44	1:00	1:31	2:02	3:04	4:08	5:10	1:30	0:39	1:01	1:23	2:06	2:49	4:16	5:44	7:10
	0:29	0:45	1:02	1:34	2:06	3:11	4:16	5:20		0:41	1:04	1:27	2:12	2:57	4:28	6:00	7:30
	0:30	0:47	1:04	1:37	2:11	3:17	4:25	5:31		0:43	1:07	1:32	2:19	3:06	4:41	6:18	7:53
1:05	0:29	0:44	1:01	1:32	2:04	3:07	4:11	5:14	1:31	0:40	1:01	1:24	2:07	2:51	4:19	5:47	7:14
	0:30	0:46	1:03	1:35	2:08	3:14	4:20	5:25		0:42	1:04	1:28	2:13	2:59	4:31	6:04	7:35
	0:31	0:48	1:05	1:39	2:13	3:20	4:29	5:37		0:44	1:08	1:33	2:20	3:08	4:45	6:22	7:58
1:06	0:29	0:45	1:02	1:34	2:06	3:10	4:15	5:19	1:32	0:40	1:02	1:25	2:09	2:53	4:21	5:51	7:19
	0:30	0:47	1:04	1:37	2:10	3:17	4:24	5:30		0:42	1:05	1:29	2:15	3:01	4:34	6:08	7:40
	0:31	0:48	1:06	1:40	2:15	3:24	4:34	5:42		0:44	1:08	1:34	2:22	3:11	4:48	6:27	8:04
1:07	0:30	0:46	1:03	1:35	2:07	3:13	4:19	5:24	1:33	0:41	1:03	1:26	2:10	2:55	4:24	5:55	7:23
	0:31	0:47	1:05	1:38	2:12	3:20	4:28	5:35		0:43	1:06	1:30	2:16	3:03	4:37	6:12	7:45
	0:32	0:49	1:07	1:42	2:17	3:27	4:38	5:47		0:45	1:09	1:35	2:24	3:13	4:51	6:31	8:09
1:08	0:30	0:46	1:04	1:36	2:09	3:15	4:23	5:28	1:34	0:41	1:03	1:27	2:11	2:56	4:27	5:58	7:28
	0:31	0:48	1:06	1:40	2:14	3:22	4:32	5:40		0:43	1:07	1:31	2:18	3:05	4:40	6:16	7:50
	0:32	0:50	1:08	1:43	2:19	3:30	4:42	5:53		0:45	1:10	1:36	2:25	3:15	4:55	6:36	8:15
1:09	0:31	0:47	1:05	1:38	2:11	3:18	4:26	5:33	1:35	0:41	1:04	1:28	2:13	2:58	4:29	6:02	7:32
	0:32	0:49	1:07	1:41	2:16	3:25	4:36	5:45		0:44	1:07	1:32	2:19	3:07	4:43	6:20	7:55
	0:33	0:51	1:10	1:45	2:21	3:33	4:46	5:58		0:46	1:11	1:37	2:27	3:17	4:58	6:40	8:20
1:10	0:31	0:48	1:06	1:39	2:13	3:21	4:30	5:37	1:36	0:42	1:05	1:29	2:14	3:00	4:32	6:05	7:37
	0:32	0:50	1:08	1:43	2:18	3:28	4:40	5:50		0:44	1:08	1:33	2:21	3:09	4:46	6:24	8:00
	0:33	0:51	1:11	1:47	2:23	3:36	4:51	6:03		0:46	1:12	1:38	2:28	3:19	5:01	6:45	8:26
1:11	0:31	0:48	1:06	1:40	2:15	3:24	4:34	5:42	1:37	0:42	1:05	1:30	2:15	3:02	4:35	6:09	7:41
	0:33	0:50	1:09	1:44	2:20	3:31	4:44	5:55		0:44	1:09	1:34	2:22	3:11	4:49	6:28	8:05
	0:34	0:52	1:12	1:48	2:25	3:40	4:55	6:09		0:47	1:12	1:39	2:30	3:21	5:04	6:49	8:31
1:12	0:32	0:49	1:07	1:42	2:17	3:27	4:37	5:47	1:38	0:43	1:06	1:30	2:17	3:04	4:37	6:13	7:46
	0:33	0:51	1:10	1:46	2:22	3:34	4:48	6:00		0:45	1:09	1:35	2:24	3:13	4:52	6:32	8:10
	0:34	0:53	1:13	1:50	2:28	3:43	4:59	6:14		0:47	1:13	1:40	2:32	3:24	5:08	6:53	8:37
1:13	0:32	0:50	1:08	1:43	2:18	3:29	4:41	5:51	1:39	0:43	1:07	1:31	2:18	3:05	4:40	6:16	7:50
	0:33	0:52	1:11	1:47	2:24	3:37	4:52	6:05		0:45	1:10	1:36	2:25	3:15	4:55	6:36	8:15
	0:35	0:54	1:14	1:51	2:30	3:46	5:04	6:20		0:48	1:14	1:41	2:33	3:26	5:11	6:58	8:42
1:14	0:33	0:50	1:09	1:44	2:20	3:32	4:45	5:56	1:40	0:44	1:07	1:32	2:19	3:07	4:43	6:20	7:55
	0:34	0:52	1:12	1:49	2:26	3:40	4:56	6:10		0:46	1:11	1:37	2:27	3:17	4:58	6:40	8:20
	0:35	0:54	1:15	1:53	2:32	3:49	5:08	6:25		0:48	1:15	1:43	2:35	3:28	5:14	7:02	8:48
1:15	0:33	0:51	1:10	1:46	2:22	3:35	4:49	6:01	1:41	0:44	1:08	1:33	2:21	3:09	4:45	6:23	7:59
	0:34	0:53	1:13	1:50	2:28	3:43	5:00	6:15		0:46	1:11	1:38	2:28	3:19	5:01	6:44	8:25
	0:36	0:55	1:16	1:55	2:34	3:53	5:12	6:31		0:49	1:16	1:44	2:37	3:30	5:18	7:07	8:54
1:16	0:34	0:52	1:11	1:47	2:24	3:38	4:52	6:05	1:42	0:44	1:08	1:34	2:22	3:11	4:48	6:27	8:04
	0:35	0:54	1:14	1:51	2:30	3:46	5:04	6:20		0:47	1:12	1:39	2:30	3:21	5:04	6:48	8:30
	0:36	0:56	1:17	1:56	2:36	3:56	5:17	6:36		0:49	1:16	1:45	2:38	3:32	5:21	7:11	8:59
1:17	0:34	0:52	1:12	1:49	2:26	3:40	4:56	6:10	1:43	0:4							

Table 6 EN2 Training Paces (with 30 seconds rest)

Threshold	Repeat Distance								Threshold	Repeat Distance							
	50	75	100	150	200	300	400	500		50	75	100	150	200	300	400	500
0:55	0:23	0:36	0:50	1:16	1:44	2:38	3:33	4:27	1:21	0:34	0:53	1:12	1:51	2:32	3:50	5:09	6:28
	0:24	0:37	0:51	1:19	1:47	2:43	3:39	4:35		0:35	0:55	1:16	1:56	2:38	3:59	5:22	6:45
	0:25	0:38	0:53	1:21	1:51	2:47	3:45	4:43		0:37	0:57	1:19	2:01	2:45	4:10	5:37	7:03
0:56	0:24	0:37	0:51	1:18	1:46	2:41	3:36	4:32	1:22	0:34	0:53	1:13	1:52	2:33	3:52	5:13	6:33
	0:24	0:38	0:52	1:20	1:49	2:46	3:43	4:40		0:36	0:55	1:16	1:57	2:40	4:02	5:26	6:50
	0:25	0:39	0:54	1:23	1:53	2:51	3:50	4:49		0:37	0:58	1:20	2:03	2:47	4:13	5:41	7:09
0:57	0:24	0:37	0:52	1:19	1:48	2:44	3:40	4:37	1:23	0:35	0:54	1:14	1:54	2:35	3:55	5:16	6:38
	0:25	0:39	0:53	1:22	1:51	2:48	3:47	4:45		0:36	0:56	1:17	1:59	2:42	4:05	5:30	6:55
	0:26	0:40	0:55	1:24	1:55	2:54	3:54	4:54		0:38	0:59	1:21	2:04	2:49	4:17	5:46	7:14
0:58	0:25	0:38	0:52	1:20	1:50	2:46	3:44	4:41	1:24	0:35	0:54	1:15	1:55	2:37	3:58	5:20	6:42
	0:25	0:39	0:54	1:23	1:53	2:51	3:51	4:50		0:37	0:57	1:18	2:00	2:44	4:08	5:34	7:00
	0:26	0:40	0:56	1:26	1:57	2:57	3:58	4:59		0:38	0:59	1:22	2:06	2:52	4:20	5:50	7:20
0:59	0:25	0:39	0:53	1:22	1:52	2:49	3:48	4:46	1:25	0:36	0:55	1:16	1:56	2:39	4:00	5:24	6:47
	0:26	0:40	0:55	1:24	1:55	2:54	3:55	4:55		0:37	0:57	1:19	2:02	2:46	4:11	5:38	7:05
	0:27	0:41	0:57	1:27	1:59	3:00	4:02	5:05		0:39	1:00	1:23	2:07	2:54	4:23	5:54	7:25
1:00	0:25	0:39	0:54	1:23	1:53	2:52	3:51	4:51	1:26	0:36	0:56	1:17	1:58	2:40	4:03	5:27	6:51
	0:26	0:41	0:56	1:26	1:57	2:57	3:59	5:00		0:38	0:58	1:20	2:03	2:48	4:14	5:42	7:10
	0:27	0:42	0:58	1:29	2:01	3:03	4:07	5:10		0:39	1:01	1:24	2:09	2:56	4:26	5:59	7:31
1:01	0:26	0:40	0:55	1:25	1:55	2:55	3:55	4:55	1:27	0:36	0:56	1:18	1:59	2:42	4:06	5:31	6:56
	0:27	0:41	0:57	1:27	1:59	3:00	4:03	5:05		0:38	0:59	1:21	2:04	2:50	4:17	5:46	7:15
	0:28	0:43	0:59	1:30	2:03	3:06	4:11	5:15		0:40	1:02	1:25	2:10	2:58	4:30	6:03	7:36
1:02	0:26	0:41	0:56	1:26	1:57	2:57	3:59	5:00	1:28	0:37	0:57	1:18	2:00	2:44	4:09	5:35	7:00
	0:27	0:42	0:58	1:29	2:01	3:03	4:07	5:10		0:38	1:00	1:22	2:06	2:52	4:20	5:50	7:20
	0:28	0:43	1:00	1:32	2:05	3:09	4:15	5:21		0:40	1:02	1:26	2:12	3:00	4:33	6:07	7:42
1:03	0:27	0:41	0:57	1:27	1:59	3:00	4:03	5:05	1:29	0:37	0:57	1:19	2:02	2:46	4:11	5:38	7:05
	0:28	0:43	0:59	1:30	2:03	3:06	4:11	5:15		0:39	1:00	1:23	2:07	2:54	4:23	5:54	7:25
	0:28	0:44	1:01	1:33	2:07	3:13	4:19	5:26		0:41	1:03	1:27	2:14	3:02	4:36	6:12	7:47
1:04	0:27	0:42	0:58	1:29	2:01	3:03	4:06	5:10	1:30	0:38	0:58	1:20	2:03	2:48	4:14	5:42	7:10
	0:28	0:43	1:00	1:32	2:05	3:09	4:15	5:20		0:39	1:01	1:24	2:09	2:56	4:26	5:58	7:30
	0:29	0:45	1:02	1:35	2:09	3:16	4:24	5:31		0:41	1:04	1:28	2:15	3:04	4:39	6:16	7:53
1:05	0:27	0:43	0:59	1:30	2:03	3:06	4:10	5:14	1:31	0:38	0:59	1:21	2:04	2:49	4:17	5:46	7:14
	0:28	0:44	1:01	1:33	2:07	3:12	4:19	5:25		0:40	1:02	1:25	2:10	2:58	4:29	6:02	7:35
	0:29	0:46	1:03	1:36	2:11	3:19	4:28	5:37		0:42	1:05	1:29	2:17	3:07	4:43	6:21	7:58
1:06	0:28	0:43	0:59	1:31	2:04	3:08	4:14	5:19	1:32	0:38	0:59	1:22	2:05	2:51	4:19	5:49	7:19
	0:29	0:45	1:02	1:34	2:09	3:15	4:23	5:30		0:40	1:02	1:26	2:12	3:00	4:32	6:06	7:40
	0:30	0:46	1:04	1:38	2:13	3:22	4:32	5:42		0:42	1:05	1:30	2:18	3:09	4:46	6:25	8:04
1:07	0:28	0:44	1:00	1:33	2:06	3:11	4:18	5:24	1:33	0:39	1:00	1:23	2:07	2:53	4:22	5:53	7:23
	0:29	0:45	1:02	1:36	2:11	3:18	4:27	5:35		0:41	1:03	1:27	2:13	3:01	4:35	6:10	7:45
	0:30	0:47	1:05	1:39	2:16	3:25	4:36	5:47		0:43	1:06	1:31	2:20	3:11	4:49	6:29	8:09
1:08	0:29	0:44	1:01	1:34	2:08	3:14	4:21	5:28	1:34	0:39	1:01	1:23	2:08	2:55	4:25	5:56	7:28
	0:30	0:46	1:03	1:37	2:13	3:21	4:31	5:40		0:41	1:04	1:28	2:14	3:03	4:38	6:14	7:50
	0:31	0:48	1:06	1:41	2:18	3:28	4:41	5:53		0:43	1:07	1:32	2:21	3:13	4:52	6:34	8:15
1:09	0:29	0:45	1:02	1:35	2:10	3:17	4:25	5:33	1:35	0:39	1:01	1:24	2:09	2:56	4:27	6:00	7:32
	0:30	0:47	1:04	1:39	2:15	3:24	4:35	5:45		0:41	1:04	1:29	2:16	3:05	4:41	6:18	7:55
	0:31	0:48	1:07	1:42	2:20	3:32	4:45	5:58		0:44	1:08	1:33	2:23	3:15	4:56	6:38	8:20
1:10	0:29	0:46	1:03	1:37	2:12	3:19	4:29	5:37	1:36	0:40	1:02	1:25	2:11	2:58	4:30	6:04	7:37
	0:31	0:47	1:05	1:40	2:17	3:27	4:39	5:50		0:42	1:05	1:30	2:17	3:07	4:44	6:22	8:00
	0:32	0:49	1:08	1:44	2:22	3:35	4:49	6:03		0:44	1:08	1:34	2:25	3:17	4:59	6:43	8:26
1:11	0:30	0:46	1:04	1:38	2:14	3:22	4:32	5:42	1:37	0:40	1:02	1:26	2:12	3:00	4:33	6:07	7:41
	0:31	0:48	1:06	1:42	2:19	3:30	4:43	5:55		0:42	1:06	1:30	2:19	3:09	4:47	6:26	8:05
	0:32	0:50	1:09	1:46	2:24	3:38	4:54	6:09		0:45	1:09	1:35	2:26	3:20	5:02	6:47	8:31
1:12	0:30	0:47	1:05	1:39	2:15	3:25	4:36	5:47	1:38	0:41	1:03	1:27	2:13	3:02	4:35	6:11	7:46
	0:31	0:49	1:07	1:43	2:20	3:33	4:47	6:00		0:43	1:06	1:31	2:20	3:11	4:50	6:30	8:10
	0:33	0:51	1:10	1:47	2:26	3:41	4:58	6:14		0:45	1:10	1:36	2:28	3:22	5:06	6:51	8:37
1:13	0:31	0:48	1:06	1:41	2:17	3:28	4:40	5:51	1:39	0:41	1:04	1:28	2:15	3:04	4:38	6:14	7:50
	0:32	0:49	1:08	1:44	2:22	3:36	4:51	6:05		0:43	1:07	1:32	2:22	3:13	4:53	6:34	8:15
	0:33	0:51	1:11	1:49	2:28	3:44	5:02	6:20		0:46	1:11	1:37	2:29	3:24	5:09	6:56	8:42
1:14	0:31	0:48	1:06	1:42	2:19	3:30	4:43	5:56	1:40	0:41	1:04	1:29	2:16	3:05	4:41	6:18	7:55
	0:32	0:50	1:09	1:46	2:24	3:39	4:55	6:10		0:44	1:08	1:33	2:23	3:15	4:56	6:38	8:20
	0:34	0:52	1:12	1:50	2:30	3:48	5:07	6:25		0:46	1:11	1:38	2:31	3:26	5:12	7:00	8:48
1:15	0:31	0:49	1:07	1:43	2:21	3:33	4:47	6:01	1:41	0:42	1:05	1:29	2:17	3:07	4:43	6:22	7:59
	0:33	0:51	1:10	1:47	2:26	3:42	4:59	6:15		0:44	1:08	1:34	2:24	3:17	4:59	6:42	8:25
	0:34	0:53	1:13	1:52	2:32	3:51	5:11	6:31		0:47	1:12	1:39	2:33	3:28	5:15	7:05	8:54
1:16	0:32	0:49	1:08	1:44	2:23	3:36	4:51	6:05	1:42	0:42	1:05	1:30	2:18	3:09	4:46	6:25	8:04
	0:33	0:51	1:11	1:49	2:28	3:45	5:02	6:20		0:45	1:09	1:35	2:26	3:19	5:01	6:46	8:30
	0:35	0:54	1:14	1:53	2:35	3:54	5:15	6:36		0:47	1:13	1:41	2:34	3:30	5:19	7:09	8:59
1:17	0:32	0:50	1:09	1:46	2:24	3:39	4:54	6:10	1:43	0:43	1:06						

Table 7 EN3 Training Paces (with 30 seconds rest)

In each set of three: top time is 7% faster than EN2 average., middle time is 5% faster than EN2 average and bottom time is 3% faster than EN2 average
Repeat Distance

Threshold	Repeat Distance								Threshold	Repeat Distance							
	50	75	100	150	200	300	400	500		50	75	100	150	200	300	400	500
0:55	0:22	0:35	0:48	1:14	1:40	2:32	3:25	4:17	1:21	0:33	0:51	1:11	1:48	2:28	3:44	5:01	6:19
	0:23	0:35	0:49	1:15	1:42	2:35	3:28	4:22		0:34	0:52	1:12	1:50	2:31	3:48	5:07	6:26
	0:23	0:36	0:50	1:16	1:44	2:38	3:33	4:27		0:34	0:53	1:13	1:52	2:33	3:52	5:13	6:33
0:56	0:23	0:35	0:49	1:15	1:42	2:35	3:28	4:22	1:22	0:33	0:52	1:11	1:50	2:30	3:47	5:05	6:23
	0:23	0:36	0:50	1:16	1:44	2:38	3:32	4:27		0:34	0:53	1:13	1:52	2:32	3:51	5:11	6:30
	0:24	0:37	0:51	1:18	1:46	2:41	3:36	4:32		0:35	0:54	1:14	1:54	2:35	3:55	5:17	6:38
0:57	0:23	0:36	0:50	1:16	1:44	2:37	3:32	4:26	1:23	0:34	0:52	1:12	1:51	2:31	3:49	5:09	6:28
	0:24	0:37	0:51	1:18	1:46	2:40	3:36	4:31		0:35	0:53	1:14	1:53	2:34	3:54	5:15	6:35
	0:24	0:37	0:52	1:19	1:48	2:44	3:40	4:37		0:35	0:55	1:15	1:55	2:37	3:58	5:21	6:43
0:58	0:24	0:37	0:51	1:18	1:46	2:40	3:36	4:31	1:24	0:34	0:53	1:13	1:52	2:33	3:52	5:12	6:33
	0:24	0:37	0:52	1:19	1:48	2:43	3:40	4:36		0:35	0:54	1:15	1:54	2:36	3:56	5:18	6:40
	0:25	0:38	0:53	1:21	1:50	2:46	3:44	4:42		0:36	0:55	1:16	1:57	2:39	4:01	5:25	6:48
0:59	0:24	0:37	0:51	1:19	1:48	2:43	3:39	4:36	1:25	0:35	0:54	1:14	1:54	2:35	3:55	5:16	6:37
	0:25	0:38	0:52	1:20	1:50	2:46	3:44	4:41		0:35	0:55	1:15	1:56	2:38	3:59	5:22	6:45
	0:25	0:39	0:53	1:22	1:52	2:49	3:48	4:46		0:36	0:56	1:17	1:58	2:41	4:04	5:28	6:53
1:00	0:24	0:38	0:52	1:20	1:49	2:46	3:43	4:40	1:26	0:35	0:54	1:15	1:55	2:37	3:58	5:20	6:42
	0:25	0:39	0:53	1:22	1:51	2:49	3:47	4:46		0:36	0:55	1:16	1:57	2:40	4:02	5:26	6:50
	0:25	0:39	0:54	1:23	1:54	2:52	3:52	4:51		0:36	0:56	1:18	1:59	2:43	4:07	5:32	6:57
1:01	0:25	0:39	0:53	1:22	1:51	2:49	3:47	4:45	1:27	0:36	0:55	1:16	1:56	2:39	4:00	5:24	6:47
	0:25	0:39	0:54	1:23	1:53	2:52	3:51	4:50		0:36	0:56	1:17	1:59	2:42	4:05	5:30	6:54
	0:26	0:40	0:55	1:25	1:56	2:55	3:56	4:56		0:37	0:57	1:19	2:01	2:45	4:10	5:36	7:02
1:02	0:25	0:39	0:54	1:23	1:53	2:51	3:51	4:50	1:28	0:36	0:56	1:17	1:58	2:40	4:03	5:27	6:51
	0:26	0:40	0:55	1:24	1:55	2:55	3:55	4:55		0:37	0:57	1:18	2:00	2:44	4:08	5:34	6:59
	0:26	0:41	0:56	1:26	1:57	2:58	4:00	5:01		0:37	0:58	1:20	2:02	2:47	4:13	5:40	7:07
1:03	0:26	0:40	0:55	1:24	1:55	2:54	3:54	4:54	1:29	0:36	0:56	1:18	1:59	2:42	4:06	5:31	6:56
	0:26	0:41	0:56	1:26	1:57	2:57	3:59	5:00		0:37	0:57	1:19	2:01	2:45	4:11	5:37	7:04
	0:27	0:41	0:57	1:27	1:59	3:01	4:03	5:06		0:38	0:58	1:21	2:04	2:49	4:15	5:44	7:12
1:04	0:26	0:40	0:56	1:26	1:57	2:57	3:58	4:59	1:30	0:37	0:57	1:18	2:00	2:44	4:09	5:35	7:01
	0:27	0:41	0:57	1:27	1:59	3:00	4:03	5:05		0:37	0:58	1:20	2:03	2:47	4:13	5:41	7:09
	0:27	0:42	0:58	1:29	2:01	3:04	4:07	5:11		0:38	0:59	1:21	2:05	2:50	4:18	5:48	7:17
1:05	0:27	0:41	0:57	1:27	1:59	3:00	4:02	5:04	1:31	0:37	0:58	1:19	2:02	2:46	4:11	5:38	7:05
	0:27	0:42	0:58	1:29	2:01	3:03	4:06	5:10		0:38	0:59	1:21	2:04	2:49	4:16	5:45	7:13
	0:28	0:43	0:59	1:30	2:03	3:07	4:11	5:16		0:39	1:00	1:22	2:06	2:52	4:21	5:52	7:22
1:06	0:27	0:42	0:58	1:28	2:00	3:02	4:06	5:08	1:32	0:38	0:58	1:20	2:03	2:48	4:14	5:42	7:10
	0:27	0:43	0:59	1:30	2:03	3:06	4:10	5:14		0:38	0:59	1:22	2:05	2:51	4:19	5:49	7:18
	0:28	0:43	1:00	1:32	2:05	3:09	4:15	5:20		0:39	1:00	1:23	2:08	2:54	4:24	5:56	7:27
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