

System for Control of the Physical Development and the Specific Capability of University Students Training Basketball in Turkey

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Abstract The aim of the study is to cultivate the educational process of physical education and sport in the universities in Turkey by discovering the features of the physical development, physical preparation and the specific technical-tactical preparation of the students, engaging with basketball and the elaboration of a system for control and evaluation of the basic signs of the specific workability. Research of the condition of the problem for physical development and the specific workability of the 69 students from 5 universities in Turkey, and comparative analysis of the physical development, the special physical and specific technical-tactical preparation of the basketball players uncover the factor structures and identify the basic factors for physical development and the specific workability of the basketball players who are the students in the different universities of Turkey. The factor structure of the physical development and the specific workability of the students from the basketball teams is based on 5 basic factors, which explain high percent (70,77%) of the starting dispersion of the researched occurrence. The first and the most important factor defines the significance of morphological signs which influence positively on the rapidity of movement and the speed endurance of the basketball players. Non-homogeneity is observed regarding the level of development of the functional capacity of the chest and the ability of the basketball players from the universities to lead the ball with high speed; the rest of the researched indicators are relatively stable, and the researched aggregate – relatively homogeneous regarding the signs, which these indicators carry information about. The evaluation of the body mass is in the zone of the norm, in general.

Keywords Physical Education, Students, Basketball, Physical Development, Training

1. Introduction

The cultivation of the educational-training process of the students from the profiled groups of the different sport disciplines is tightly connected to the learning of the features of the different motor activities. This is why there is a need to conduct researches periodically and to uncover the basic factors and tendencies for this development which is an objective predisposition for a deeper understanding in the essence of the occurrence. The goal is to improve the preparation of the young people and to increase the effectiveness of the training work which they are doing.

The control is part of the cognitive activity of the person[7] or the cognitive process[8], where the information is stored and where the real condition of an object (system), considering its targeting (planned in advance) development and cultivation, is evaluated. It is known that the system for control in the sport includes three subject fields; measurement, evaluating, optimizing [7,8,9]. These are three interlinked subsystems of control, which provide the needed information for the management of the training and the competition processes [3].

The summary effect on the training loading is characterizing with cumulating in the organism of the athlete of “traces, reflections”, which lead to permanent, resistant characteristics of the general and the special workability [9]. In the field of the sport science and practice the testing [10] has a significant role and presence in the educational-training and in the searching activities, in its diversity of specially selected and standardized motor activities. By testing in sport, from one side, we can registrate a certain condition of some abilities or characteristics of the researched object and from the other side this condition could be compared to some of the criteria, established earlier, i.e. to be evaluated.

It is one of the desired goals of basketball players, regardless if their playing position is guard, forward or center to improve their jumping ability, in addition to achieving a high level of proficiency in other defensive and offensive acts they have to perform during the game [5].

Detection of the determinative factors of team performance is so important not only in providing exercise effectiveness but also developing game strategies and building up team compositions [4]. Here it is at this point the normative tables allow easy and fast evaluation of the condition of each sign, carrying information about the physical development, the special physical and the specific technical-tactical preparation the researched aggregate.

2. Materials and Methods

Organization of the Research

Subject of the research: physical development and specific workability of the basketball students from the universities in Turkey.

Object of the research: the signs of the physical development, the special physical and the specific technical-tactical preparation of students in the universities.

Contingent of the research: 69 students from 5 universities included in the organized basketball activities.

Description of the Tests (Indicators)

10: 20 m sprint – after sound signal, they make two runs from 20m. The best achievement is respected

11: Running between stands the performer is moving in equilateral triangle with length of the sides 10 m (Fig.1).

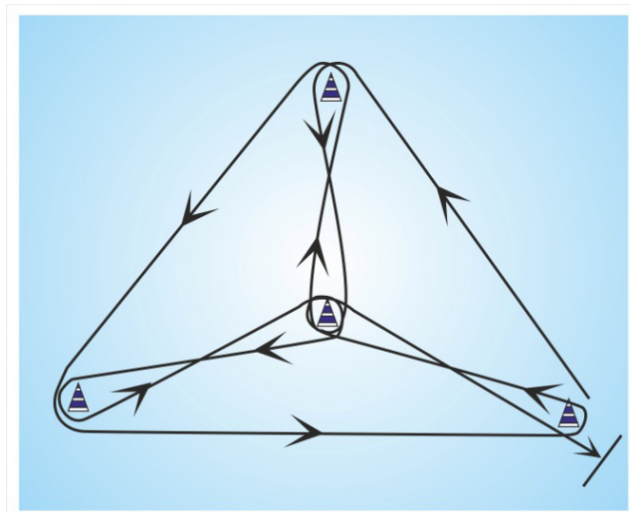


Figure 1. Running way between stands

12: Vertical jump – they measure the height with stretched arm, and after this the researched person squats, performs swish with the hands and jumps with two legs from place. They respect the reached height. The difference

between the two indicators gives the pure jump.

13: Triple jump – they perform a swish with hands forwards, down and backwards, which is done together with pulsing of the legs, followed by backwards swish of the hands from down to forward and up and jump with the two legs up and forward. Then there is thrusting from the ground with one of them and then with the other leg and landing on the two legs. They respect the distance from the starting line to the last trace, left by the jumping person. And better achievement is respected.

14: Throwing a medicine ball – the person who is performing is sitting on a chair, with his back to the direction of the throwing. The ball is thrown backwards through the head. They measure the distance from the line of the rear legs of the chair to the place where the ball touches the ground. They do this twice and respect the better achievement.

15: Sit ups – starting position- occipital lying position with knees, constricted to 90°, the feet are opened on the width of the shoulders. The hands are placed on the nape with elbows aside. A partner is holding the ankles and fixes the feet on the ground. There should be a one fist distance between the chin and the chest during the whole time(30s.)

16: "Shutter"running – short sprints with the change of the direction (Fig.2). They run always facing forward. The people go three lengths (252m) on the playground.

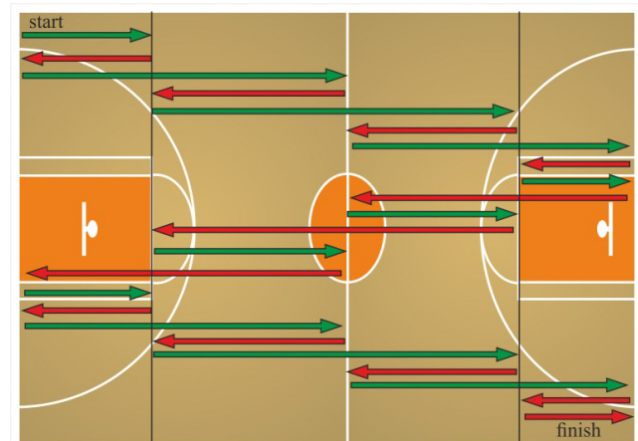


Figure 2. "Shutter" running direction

17: Eights with dribbling– the steps are on the line of the shoulders. After a signal, they perform dribbling with right hand, aside from the right leg, then they do a crossed dribbling with devolving the ball from the back to the forward between the legs, crossed dribbling from back to forward between the legs to the right hand and others. They count each thump on the ground, performed without breaking the certain sequence of the movements (30s). It is performed twice and respected the better. **18: Leading the ball between stands** – the distance is run while they lead a ball (Fig.1)

19: Index of leading the ball – differences between the achievements from test № 18 and test № 11, and it is reported.

20: Defensive movement – they perform this around a square with a 5 m side, and they put stands on the corners (Fig.3). They perform sprint on one of the sides, they do a side movement with defensive stand on the second one, they run with their back on the third one and right after that they go back in the opposite direction for the same way until the starting position.

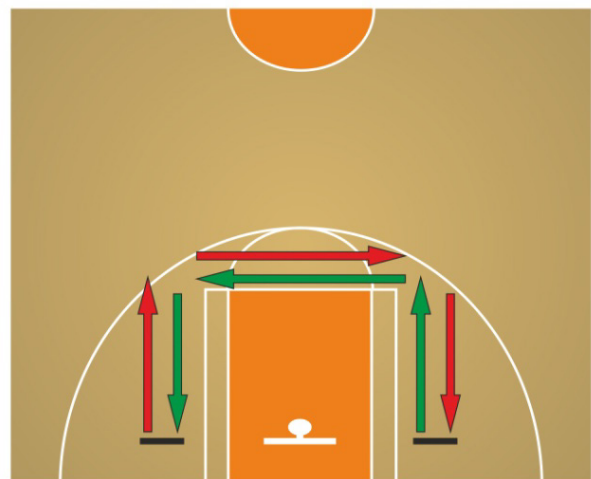


Figure 3. Defensive Movement

21 and 22: Speed shooting with movement time and coefficient –they perform an elusion with leading the ball, followed by shooting in a basket in movement, successively for each of the three stands, put on the line for 3 points (Fig.4) They perform two rounds (6 shoots).

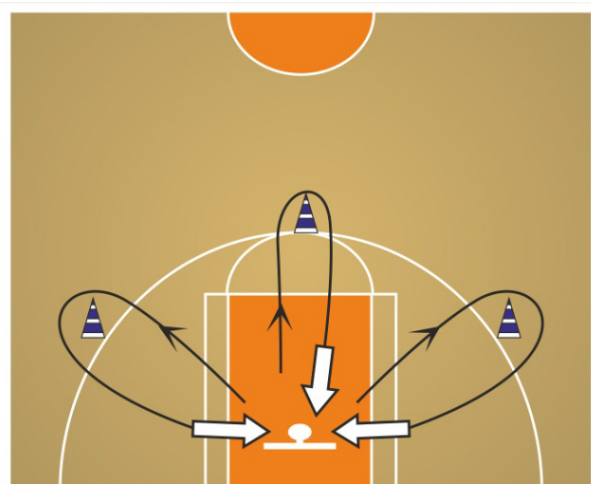


Figure 4. "Speed shooting" movement way

“On the first round the leading and the shooting are done with the hand which they use the most, and on the second round with the opposite hand. They respect the time for performance (ind.21) and the number of successful strikes in the basket. They measure the coefficient of effectiveness of the speed shooting in movement (ind.22), as the time for performance is divided on the number of these successful strikes in the basket

23: Shooting with jump and feeder – they perform 3 series with 10 shoots in the basket from 3 positions: Perpendicular to the board; under 45° angle to the board and under 0° angle to the board. The positions could be situated in the left or the right half of the playground. They work in couples (shooter and feeder). After each series the two of them are changing their functions. The shooting is performed from 5 m distance from the projection of the center of the ring on the terrain.

24: Penalty hits - % successful – they work in couples. They perform 10 series of 2 penalty hits (20 in total) with a feeder. They esteem the number of the successful penalty hits. As a result from the test, they write the relative part (in %) of the successful hits in the basket, to all penalty hits performed.

Statistical Methods for Data Analysis

Factor analysis – for the unfolding of the factor structure of the physical development, the special physical and specific technical-tactical preparation of the students, engaged with basketball in the universities in Turkey.

Signal method for evaluation – For evaluation of the condition of the researched signs of the specific workability. On the basis of the average for the researched aggregates level (25p.) for each signs there are normative signs elaborated to evaluate the special physical and the specific technical-tactical preparation of the basketball students.

3. Findings

The results of the variational analysis of the starting information from the conducted sport-pedagogical testing generally for the whole researched aggregate of basketball students in different universities in Turkey, are presented in table 1.

Table 1. Average values and varieties of the indicators

№	Indicators	X	S	V	min	max	As	Ex
1	Height	189,86	9,65	5,08	173	208	-0,09	-1,18
2	Weight	86,78	14,00	16,13	62	120	0,55	-0,07
3	Body Mas Index (BMI)	23,94	2,24	9,36	20,02	29,8	0,46	0,22
4	Stretch	191,16	10,34	5,41	168	212	-0,17	-0,73
5	Length of upper limb	84,93	8,51	10,02	66	100	-0,36	-0,92
6	Length of lower limb	114,22	7,38	6,46	98	127	-0,14	-0,89
7	Lenght of palm	20,84	1,43	6,85	17	25	0,41	0,76
8	Length of foot	28,28	1,64	5,78	25	32	0,21	-0,51
9	Chest –respiratory differences	5,59	2,79	49,90	2	15	1,64	3,33
10	20 m sprint	3,12	0,20	6,49	3,68	2,64	0,08	0,33
11	Running between stands	20,82	1,68	8,06	24,89	18,12	0,37	-0,41
12	Vertical jump	61,75	8,83	14,30	37	77	-0,36	-0,10
13	Triple jump	6,76	0,57	8,40	5,72	8,44	0,41	-0,27
14	Throwing a ball - backwards	12,51	1,93	15,44	7,95	16,58	0,17	-0,07
15	Sit-ups	29,30	5,03	17,17	17	41	-0,05	-0,53
16	“Shutter” running	65,34	4,37	6,69	78	58,05	0,72	0,35
17	Eigts	54,94	10,51	19,13	32	72	-0,10	-0,97
18	Leading between stands	21,86	1,85	8,47	27,71	18,35	0,42	0,30
19	Index for leading of the ball	1,04	0,98	94,70	4,69	0	1,65	2,84
20	Movement in defense	9,38	1,14	12,19	12,05	7,05	-0,31	-0,22
21	Shooting in movement - t	32,42	1,92	5,91	38,18	28,78	0,73	0,09
22	Shooting in movement – coeff.	6,65	1,64	24,63	12,04	4,79	1,81	3,33
23	Shooting from position, feeder	57,10	11,26	19,72	23,33	76,67	-0,43	0,14
24	Penalty hits	72,25	12,88	17,82	35	95	-0,75	0,74

The physical development and the specific workability of the students from the Turkish basketball are created from 5 basic factors which are explaining the high percent of the starting dispersion of the researched occurrence (Table 2).

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Table 2. Factor structure of the physical development and the specific workabilities

No	Indicators	I	II	III	IV	V	h ²	1-h ²
1	Height	0,877	0,240	-0,241	-0,004	-0,081	0,891	0,109
2	Weight	0,898	0,156	0,119	-0,193	0,002	0,883	0,117
3	BMI	0,573	0,033	0,433	-0,319	0,086	0,627	0,373
4	Stretch	0,852	0,340	-0,181	-0,175	-0,066	0,910	0,090
5	Length of the upper limb	0,658	0,544	0,145	0,014	-0,100	0,760	0,240
6	Length of the lower limb	0,813	0,411	-0,084	0,188	-0,026	0,874	0,126
7	Length of the palm	0,773	0,385	0,048	-0,050	0,001	0,750	0,250
8	Length of the foot	0,849	0,308	-0,056	0,003	-0,135	0,837	0,163
9	Respiratory difference	0,272	0,383	-0,111	0,165	0,222	0,309	0,691
10	Sprint 20 m	0,554	-0,055	-0,103	0,115	0,039	0,635	0,365
11	Running between stands	0,407	-0,421	-0,055	0,747	-0,079	0,911	0,089
12	Vertical jump	-0,145	0,404	-0,658	0,117	-0,009	0,630	0,370
13	Triple jump	-0,061	0,742	-0,251	-0,055	-0,145	0,641	0,359
14	Throwing a thick ball	0,293	0,524	-0,137	0,044	0,509	0,640	0,360
15	Sit-ups	-0,239	0,653	0,329	0,337	-0,070	0,710	0,290
16	“Shutter” running	0,503	-0,473	0,156	-0,228	-0,317	0,653	0,347
17	Eights with dribbling	-0,327	0,740	0,150	0,152	0,122	0,714	0,286
18	Dribbling stands	0,485	-0,571	-0,067	0,507	0,310	0,919	0,081
19	Index for leading	0,217	-0,356	-0,032	-0,032	0,719	0,795	0,205
20	Movement with defense	0,325	-0,688	-0,235	-0,088	0,140	0,662	0,338
21	Shooting in movement-t	0,358	-0,431	0,597	0,055	-0,087	0,680	0,320
22	Shooting in movement- coeff.	0,275	-0,164	0,478	0,323	0,009	0,435	0,565
23	Shooting from position%	-0,231	0,566	0,395	0,279	0,239	0,665	0,335
24	Penalty hits % successful	-0,118	0,376	0,469	-0,232	0,153	0,452	0,548
	Σa² = 70,77 %	28,24	22,16	8,51	6,75	5,11		

Table 3. The average level of the players (specific of the game post)

No	Indicators	Guards	Forwards	Centers
1	Height	182,52	191,39	201,67
2	Weight	77,65	86,44	103,44
4	Horizontal Stretch	183,40	193,10	202,86
5	Length of the upper limb	82,13	84,27	92,83
6	Length of the lower limb	109,50	115,45	120,83
7	Length of the palm	20,06	20,92	22,08
8	Length of the foot	27,25	28,39	29,97
9	Respiratory difference	4,63	6,32	6,28
10	20 m sprint	3,01	3,12	3,22
11	Running between stands	19,94	21,18	21,43
12	Vertical jump	62,50	63,42	58,89
13	Triple jump	6,71	6,88	6,85
14	Throwing a thick ball – backwards	11,75	13,14	12,62
15	Sit-ups	30,69	29,87	27,67
16	“Shutter” running	62,89	65,23	68,67
17	Eights with dribbling	59,12	54,68	50,22
18	Leading the ball between stands	20,92	22,09	22,66
19	Index of leading the ball	0,97	0,91	1,23
20	Moving in defense	8,93	9,43	9,75
21	Shooting in movement-t	31,87	32,23	33,61
22	Shooting in movement – time and coefficient	6,39	6,52	7,05
23	Shooting with jump and feeder	60,77	58,49	50,00
24	Penalty hits - % successful	72,12	74,19	70,00

The average level of each researched aggregate answers to 25p. (Table 3). When there are better results than the average, the evaluations are higher than 25p. and the opposite – when there are worse results, the values are lower than 25p.(adds.1-norm.tables) For the indicators where the lower values of the result answer to higher quality, the scales for evaluation are inverted. For us this is concerning the following indicators: 10; 11; 16; 18; 19; 20; 21 and 22.

4. Discussion and Conclusions

According to the theory of the sport science [9] the adaptational process is a non-linear function of the physical loading, i.e. the dependency “dosis-effect” is developing by the so called logistic graph. This means that depending on the moment condition of the sign, for which the relevant indicator carries information, for the same quantity of training work, it will obtain different effect [11]. Therefore, the higher the level of development for a certain sign, i.e. the achievement is better, the more little growth we expect about it on a unit of training work. The results reflected that, the differences for the indicators 15, 12 and 14 are a lot more evident. The maximal achievements of these indicators are over 2 times higher than the minimal. The differences in the achievements are naturally proving that the level of development of the signs of physical preparation is disadvantaged and they are reflecting on the values of the coefficient of the V variation. The values of the coefficient of the V variation for them are moving between 14,30 % and 17,17 %, which from the point of view of the sport statistics is putting them in the zone of the relative stability. This gives us foundation to consider that the researched aggregate is relatively homogeneous regarding: the explosive power of the abdominal muscularity; the explosive power of the upper limbs and the shoulders during muscle efforts backwards and upwards; the explosive power of the lower limbs during vertical muscle efforts. The researched basketball players have done between 32 and 72 circle with the ball around the knees for the first test “Eighths”. As we can see the difference between the biggest and the smallest achievement is evident. This is reflecting on the coefficient of the V variation. We can see that for this indicator V is 19,13 %. From the norms of the sport statistic this means that the researched aggregate is relatively 71 homogeneous regarding the ability of the boys included in it to handle the ball on one place. The lowest variable and therefore the

most stable are the 18th and the 21st indicators where the values of the coefficient of variation are lower than 10 % (respectively 8,47 % and 5,91 %). This gives us foundation to think that the whole researched aggregate is homogeneous regarding the rapidity of movement on the playground with leading the ball which is decisive factor during the performance of speed shooting in movement. The highest variable and therefore unstable is indicator 19. The value of the coefficient of variation there is almost 95 %. This gives us foundation to consider that the researched aggregate is non-homogeneous regarding the ability of the basketball players from the university teams to perform master leading off the ball (table 1).

The general review on the factor structure shows that for the researched Turkish basketball players, the signs for the physical development and the special physical preparation are defining. They are building the first four factors of the observed occurrence and have positive influence on the specific abilities of the competitors. Only the last one (5-th) factor is linked only with the specific ability to lead the ball with high speed.

The analysis of the results and the summaries that are made in the text allow us to form the following **conclusions**:

1. The evaluation of the body mass is in the zone of the norm, in general.
2. The individual features in the development of the observed signs are reflecting on the homogeneity of the researched aggregate with high guarantee probability, we can say that the observed aggregates are homogeneous regarding the signs of the physical development, the rapidity of movement on the ground with leading the ball and the speed shooting in movement; non-homogeneity is observed regarding the level of development of the functional capacity of the chest and the ability of the basketball players from the universities to lead the ball with high speed; the rest of the researched indicators are relatively stable, and the researched aggregate – relatively homogeneous regarding the signs, which these indicators carry information about.
3. The factor structure of the physical development and the specific workability of the students from the Turkish basketball teams is based on 5 basic factors, which explain high percent (70,77%) of the starting dispersion of the researched occurrence. The first and the most_important factor defines the significance of morphological signs which influence positively on the rapidity movement and the speed endurance of the basketball players (table 2).

Appendix**Normative Tables**

Centers

Points	INDICATORS																							
	1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
50	208,14	125,29	213,86	101,58	128,08	25,51	32,92	13,78	2,75	18,43	78,89	8,35	16,45	41,87	61,17	71,22	18,66	0,23	7,25	29,11	4,55	77,50	97,50	
49	207,88	124,42	213,42	101,23	127,79	25,37	32,80	13,48	2,76	18,55	78,09	8,29	16,29	41,30	61,47	70,38	18,82	0,27	7,35	29,29	4,65	76,40	96,40	
48	207,62	123,55	212,98	100,88	127,50	25,23	32,69	13,18	2,78	18,67	77,29	8,23	16,14	40,73	61,77	69,54	18,98	0,31	7,45	29,47	4,75	75,30	95,30	
47	207,36	122,67	212,54	100,53	127,21	25,10	32,57	12,88	2,80	18,79	76,49	8,17	15,99	40,16	62,07	68,70	19,14	0,35	7,55	29,65	4,85	74,20	94,20	
46	207,11	121,80	212,10	100,18	126,92	24,96	32,45	12,58	2,82	18,91	75,69	8,11	15,83	39,59	62,37	67,86	19,30	0,39	7,65	29,83	4,95	73,10	93,10	
45	206,85	120,92	211,66	99,83	126,63	24,82	32,33	12,28	2,84	19,03	74,89	8,05	15,68	39,03	62,67	67,02	19,46	0,43	7,75	30,01	5,05	72,00	92,00	
44	206,59	120,05	211,22	99,48	126,34	24,69	32,21	11,98	2,86	19,15	74,09	7,99	15,53	38,46	62,97	66,18	19,62	0,47	7,85	30,19	5,15	70,90	90,90	
43	206,33	119,18	210,78	99,13	126,05	24,55	32,10	11,68	2,88	19,27	73,29	7,93	15,37	37,89	63,27	65,34	19,78	0,51	7,95	30,37	5,25	69,80	89,80	
42	206,07	118,30	210,34	98,78	125,76	24,41	31,98	11,38	2,90	19,39	72,49	7,87	15,22	37,32	63,57	64,50	19,94	0,55	8,05	30,55	5,35	68,70	88,70	
41	205,81	117,43	209,90	98,43	125,47	24,28	31,86	11,08	2,92	19,51	71,69	7,81	15,07	36,75	63,87	63,66	20,10	0,59	8,15	30,73	5,45	67,60	87,60	
40	205,55	116,55	209,46	98,08	125,18	24,14	31,74	10,78	2,94	19,63	70,89	7,75	14,92	36,19	64,17	62,82	20,26	0,63	8,25	30,91	5,55	66,50	86,50	
39	205,29	115,68	209,02	97,73	124,89	24,00	31,62	10,48	2,95	19,75	70,09	7,69	14,76	35,62	64,47	61,98	20,42	0,67	8,35	31,09	5,65	65,40	85,40	
38	205,03	114,81	208,58	97,38	124,60	23,86	31,51	10,18	2,97	19,87	69,29	7,63	14,61	35,05	64,77	61,14	20,58	0,71	8,45	31,27	5,75	64,30	84,30	
37	204,77	113,93	208,14	97,03	124,31	23,73	31,39	9,88	2,99	19,99	68,49	7,57	14,46	34,48	65,07	60,30	20,74	0,75	8,55	31,45	5,85	63,20	83,20	
36	204,52	113,06	207,70	96,68	124,02	23,59	31,27	9,58	3,01	20,11	67,69	7,51	14,30	33,91	65,37	59,46	20,90	0,79	8,65	31,63	5,95	62,10	82,10	
35	204,26	112,18	207,26	96,33	123,73	23,45	31,15	9,28	3,03	20,23	66,89	7,45	14,15	33,35	65,67	58,62	21,06	0,83	8,75	31,81	6,05	61,00	81,00	
34	204,00	111,31	206,82	95,98	123,44	23,32	31,03	8,98	3,05	20,35	66,09	7,39	14,00	32,78	65,97	57,78	21,22	0,87	8,85	31,99	6,15	59,90	79,90	
33	203,74	110,44	206,38	95,63	123,15	23,18	30,92	8,68	3,07	20,47	65,29	7,33	13,84	32,21	66,27	56,94	21,38	0,91	8,95	32,17	6,25	58,80	78,80	
32	203,48	109,56	205,94	95,28	122,86	23,04	30,80	8,38	3,09	20,59	64,49	7,27	13,69	31,64	66,57	56,10	21,54	0,95	9,05	32,35	6,35	57,70	77,70	
31	203,22	108,69	205,50	94,93	122,57	22,91	30,68	8,08	3,11	20,71	63,69	7,21	13,54	31,07	66,87	55,26	21,70	0,99	9,15	32,53	6,45	56,60	76,60	
30	202,96	107,81	205,06	94,58	122,28	22,77	30,56	7,78	3,13	20,83	62,89	7,15	13,39	30,51	67,17	54,42	21,86	1,03	9,25	32,71	6,55	55,50	75,50	
29	202,70	106,94	204,62	94,23	121,99	22,63	30,44	7,48	3,14	20,95	62,09	7,09	13,23	29,94	67,47	53,58	22,02	1,07	9,35	32,89	6,65	54,40	74,40	

28	202,44	106,07	204,18	93,88	121,70	22,49	30,33	7,18	3,16	21,07	61,29	7,03	13,08	29,37	67,77	52,74	22,18	1,11	9,45	33,07	6,75	53,30	73,30
27	202,18	105,19	203,74	93,53	121,41	22,36	30,21	6,88	3,18	21,19	60,49	6,97	12,93	28,80	68,07	51,90	22,34	1,15	9,55	33,25	6,85	52,20	72,20
26	201,93	104,32	203,30	93,18	121,12	22,22	30,09	6,58	3,20	21,31	59,69	6,91	12,77	28,23	68,37	51,06	22,50	1,19	9,65	33,43	6,95	51,10	71,10
25	201,67	103,44	202,86	92,83	120,83	22,08	29,97	6,28	3,22	21,43	58,89	6,85	12,62	27,67	68,67	50,22	22,66	1,23	9,75	33,61	7,05	50,00	70,00
24	201,41	102,47	202,40	92,36	120,43	21,98	29,88	6,08	3,24	21,56	58,24	6,80	12,49	27,17	69,12	49,72	22,82	1,27	9,85	33,83	7,24	48,90	68,90
23	201,15	101,50	201,93	91,89	120,03	21,88	29,79	5,88	3,25	21,69	57,59	6,76	12,35	26,67	69,57	49,22	22,98	1,31	9,95	34,05	7,43	47,80	67,80
22	200,89	100,53	201,46	91,42	119,63	21,78	29,70	5,68	3,27	21,82	56,94	6,71	12,22	26,17	70,03	48,72	23,14	1,35	10,05	34,27	7,62	46,70	66,70
21	200,63	99,56	201,00	90,95	119,23	21,68	29,61	5,48	3,28	21,95	56,29	6,67	12,09	25,67	70,48	48,22	23,30	1,39	10,15	34,49	7,81	45,60	65,60
20	200,37	98,59	200,53	90,48	118,83	21,58	29,52	5,28	3,30	22,08	55,64	6,62	11,96	25,17	70,94	47,72	23,46	1,43	10,25	34,71	8,00	44,50	64,50
19	200,11	97,62	200,07	90,01	118,43	21,48	29,43	5,08	3,31	22,21	54,99	6,58	11,82	24,67	71,39	47,22	23,62	1,47	10,35	34,93	8,19	43,40	63,40
18	199,85	96,65	199,60	89,54	118,03	21,38	29,34	4,88	3,33	22,34	54,34	6,53	11,69	24,17	71,84	46,72	23,78	1,51	10,45	35,15	8,38	42,30	62,30
17	199,59	95,68	199,13	89,07	117,63	21,28	29,25	4,68	3,34	22,47	53,69	6,49	11,56	23,67	72,30	46,22	23,94	1,55	10,55	35,37	8,57	41,20	61,20
16	199,34	94,71	198,67	88,59	117,23	21,18	29,16	4,48	3,36	22,60	53,04	6,44	11,42	23,17	72,75	45,72	24,10	1,59	10,65	35,59	8,76	40,10	60,10
15	199,08	93,74	198,20	88,12	116,83	21,08	29,07	4,28	3,37	22,73	52,39	6,40	11,29	22,67	73,21	45,22	24,26	1,63	10,75	35,81	8,95	39,00	59,00
14	198,82	92,77	197,74	87,65	116,43	20,98	28,98	4,08	3,39	22,86	51,74	6,35	11,16	22,17	73,66	44,72	24,42	1,67	10,85	36,03	9,14	37,90	57,90
13	198,56	91,80	197,27	87,18	116,03	20,88	28,89	3,88	3,40	22,99	51,09	6,31	11,02	21,67	74,11	44,22	24,58	1,71	10,95	36,25	9,33	36,80	56,80
12	198,30	90,83	196,80	86,71	115,63	20,78	28,80	3,68	3,42	23,12	50,44	6,26	10,89	21,17	74,57	43,72	24,74	1,75	11,05	36,47	9,52	35,70	55,70
11	198,04	89,86	196,34	86,24	115,23	20,68	28,71	3,48	3,43	23,25	49,79	6,22	10,76	20,67	75,02	43,22	24,90	1,79	11,15	36,69	9,71	34,60	54,60
10	197,78	88,89	195,87	85,77	114,83	20,58	28,62	3,28	3,45	23,38	49,14	6,17	10,63	20,17	75,48	42,72	25,06	1,83	11,25	36,91	9,90	33,50	53,50
9	197,52	87,92	195,41	85,30	114,43	20,48	28,53	3,08	3,46	23,51	48,49	6,13	10,49	19,67	75,93	42,22	25,22	1,87	11,35	37,13	10,09	32,40	52,40
8	197,26	86,95	194,94	84,83	114,03	20,38	28,44	2,88	3,48	23,64	47,84	6,08	10,36	19,17	76,38	41,72	25,38	1,91	11,45	37,35	10,28	31,30	51,30
7	197,00	85,98	194,47	84,36	113,63	20,28	28,35	2,68	3,49	23,77	47,19	6,04	10,23	18,67	76,84	41,22	25,54	1,95	11,55	37,57	10,47	30,20	50,20
6	196,75	85,01	194,01	83,88	113,23	20,18	28,26	2,48	3,51	23,90	46,54	5,99	10,09	18,17	77,29	40,72	25,70	1,99	11,65	37,79	10,66	29,10	49,10
5	196,49	84,04	193,54	83,41	112,83	20,08	28,17	2,28	3,52	24,03	45,89	5,95	9,96	17,67	77,75	40,22	25,86	2,03	11,75	38,01	10,85	28,00	48,00
4	196,23	83,07	193,08	82,94	112,43	19,98	28,08	2,08	3,54	24,16	45,24	5,90	9,83	17,17	78,20	39,72	26,02	2,07	11,85	38,23	11,04	26,90	46,90
3	195,97	82,10	192,61	82,47	112,03	19,88	27,99	1,88	3,55	24,29	44,59	5,86	9,69	16,67	78,65	39,22	26,18	2,11	11,95	38,45	11,23	25,80	45,80
2	195,71	81,13	192,14	82,00	111,63	19,78	27,90	1,68	3,57	24,42	43,94	5,81	9,56	16,17	79,11	38,72	26,34	2,15	12,05	38,67	11,42	24,70	44,70
1	195,45	80,16	191,68	81,53	111,23	19,68	27,81	1,48	3,58	24,55	43,29	5,77	9,43	15,67	79,56	38,22	26,50	2,19	12,15	38,89	11,61	23,60	43,60

System for Control of the Physical Development and
the Specific Capability of University Students Training Basketball in Turkey

Forwards

Points	INDICATORS																							
	1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
50	206,39	105,94	205,85	97,27	129,20	23,99	31,39	13,82	2,72	17,68	79,67	8,38	17,14	41,10	57,73	75,43	18,59	0,16	7,18	29,73	4,52	80,99	99,42	
49	205,79	105,16	205,34	96,75	128,65	23,87	31,27	13,52	2,74	17,82	79,02	8,32	16,98	40,65	58,03	74,60	18,73	0,19	7,27	29,83	4,60	80,09	98,41	
48	205,19	104,38	204,83	96,23	128,10	23,75	31,15	13,22	2,75	17,96	78,37	8,26	16,82	40,20	58,33	73,77	18,87	0,22	7,36	29,93	4,68	79,19	97,40	
47	204,59	103,60	204,32	95,71	127,55	23,63	31,03	12,92	2,77	18,10	77,72	8,20	16,66	39,75	58,63	72,94	19,01	0,25	7,45	30,03	4,76	78,29	96,39	
46	203,99	102,82	203,81	95,19	127,00	23,50	30,91	12,62	2,79	18,24	77,07	8,14	16,50	39,30	58,93	72,11	19,15	0,28	7,54	30,13	4,84	77,39	95,38	
45	203,39	102,04	203,30	94,67	126,45	23,38	30,79	12,32	2,80	18,38	76,42	8,08	16,34	38,85	59,23	71,28	19,29	0,31	7,63	30,23	4,92	76,49	94,37	
44	202,79	101,26	202,79	94,15	125,90	23,26	30,67	12,02	2,82	18,52	75,77	8,02	16,18	38,40	59,53	70,45	19,43	0,34	7,72	30,33	5,00	75,59	93,36	
43	202,19	100,48	202,28	93,63	125,35	23,13	30,55	11,72	2,83	18,66	75,12	7,96	16,02	37,95	59,83	69,62	19,57	0,37	7,81	30,43	5,08	74,69	92,36	
42	201,59	99,70	201,77	93,11	124,80	23,01	30,43	11,42	2,85	18,80	74,47	7,90	15,86	37,50	60,13	68,79	19,71	0,40	7,90	30,53	5,16	73,79	91,35	
41	200,99	98,92	201,26	92,59	124,25	22,89	30,31	11,12	2,87	18,94	73,82	7,84	15,70	37,05	60,43	67,96	19,85	0,43	7,99	30,63	5,24	72,89	90,34	
40	200,39	98,14	200,75	92,07	123,70	22,76	30,19	10,82	2,88	19,08	73,17	7,78	15,54	36,61	60,73	67,13	19,99	0,46	8,08	30,73	5,32	71,99	89,33	
39	199,79	97,36	200,24	91,55	123,15	22,64	30,07	10,52	2,90	19,22	72,52	7,72	15,38	36,16	61,03	66,30	20,13	0,49	8,17	30,83	5,40	71,09	88,32	
38	199,19	96,58	199,73	91,03	122,60	22,52	29,95	10,22	2,91	19,36	71,87	7,66	15,22	35,71	61,33	65,47	20,27	0,52	8,26	30,93	5,48	70,19	87,31	
37	198,59	95,80	199,22	90,51	122,05	22,40	29,83	9,92	2,93	19,50	71,22	7,60	15,06	35,26	61,63	64,64	20,41	0,55	8,35	31,03	5,56	69,29	86,30	
36	197,99	95,02	198,71	89,99	121,50	22,27	29,71	9,62	2,95	19,64	70,57	7,54	14,90	34,81	61,93	63,81	20,55	0,58	8,44	31,13	5,64	68,39	85,29	
35	197,39	94,24	198,20	89,47	120,95	22,15	29,59	9,32	2,96	19,78	69,92	7,48	14,74	34,36	62,23	62,98	20,69	0,61	8,53	31,23	5,72	67,49	84,28	
34	196,79	93,46	197,69	88,95	120,40	22,03	29,47	9,02	2,98	19,92	69,27	7,42	14,58	33,91	62,53	62,15	20,83	0,64	8,62	31,33	5,80	66,59	83,27	
33	196,19	92,68	197,18	88,43	119,85	21,90	29,35	8,72	2,99	20,06	68,62	7,36	14,42	33,46	62,83	61,32	20,97	0,67	8,71	31,43	5,88	65,69	82,27	
32	195,59	91,90	196,67	87,91	119,30	21,78	29,23	8,42	3,01	20,20	67,97	7,30	14,26	33,01	63,13	60,49	21,11	0,70	8,80	31,53	5,96	64,79	81,26	
31	194,99	91,12	196,16	87,39	118,75	21,66	29,11	8,12	3,03	20,34	67,32	7,24	14,10	32,56	63,43	59,66	21,25	0,73	8,89	31,63	6,04	63,89	80,25	
30	194,39	90,34	195,65	86,87	118,20	21,53	28,99	7,82	3,04	20,48	66,67	7,18	13,94	32,12	63,73	58,83	21,39	0,76	8,98	31,73	6,12	62,99	79,24	
29	193,79	89,56	195,14	86,35	117,65	21,41	28,87	7,52	3,06	20,62	66,02	7,12	13,78	31,67	64,03	58,00	21,53	0,79	9,07	31,83	6,20	62,09	78,23	
28	193,19	88,78	194,63	85,83	117,10	21,29	28,75	7,22	3,07	20,76	65,37	7,06	13,62	31,22	64,33	57,17	21,67	0,82	9,16	31,93	6,28	61,19	77,22	
27	192,59	88,00	194,12	85,31	116,55	21,17	28,63	6,92	3,09	20,90	64,72	7,00	13,46	30,77	64,63	56,34	21,81	0,85	9,25	32,03	6,36	60,29	76,21	
26	191,99	87,22	193,61	84,79	116,00	21,04	28,51	6,62	3,11	21,04	64,07	6,94	13,30	30,32	64,93	55,51	21,95	0,88	9,34	32,13	6,44	59,39	75,20	

<u>25</u>	<u>191.39</u>	<u>86.44</u>	<u>193.10</u>	<u>84.27</u>	<u>115.45</u>	<u>20.92</u>	<u>28.39</u>	<u>6.32</u>	<u>3.12</u>	<u>21.18</u>	<u>63.42</u>	<u>6.88</u>	<u>13.14</u>	<u>29.87</u>	<u>65.23</u>	<u>54.68</u>	<u>22.09</u>	<u>0.91</u>	<u>9.43</u>	<u>32.23</u>	<u>6.52</u>	<u>58.49</u>	<u>74.19</u>
24	190,79	85,66	192,55	83,65	114,80	20,82	28,27	6,12	3,14	21,32	62,57	6,83	12,98	29,53	65,53	53,85	22,23	0,96	9,52	32,40	6,67	57,59	73,18
23	190,19	84,88	192,00	83,03	114,15	20,72	28,15	5,92	3,15	21,46	61,72	6,78	12,82	29,19	65,83	53,02	22,37	1,01	9,61	32,57	6,82	56,69	72,18
22	189,59	84,10	191,45	82,41	113,50	20,62	28,03	5,72	3,17	21,60	60,87	6,73	12,66	28,85	66,13	52,19	22,51	1,06	9,70	32,74	6,97	55,79	71,17
21	188,99	83,32	190,90	81,79	112,85	20,52	27,91	5,52	3,19	21,74	60,02	6,68	12,50	28,51	66,43	51,36	22,65	1,11	9,79	32,91	7,12	54,89	70,16
20	188,39	82,54	190,35	81,17	112,20	20,42	27,79	5,32	3,20	21,88	59,17	6,63	12,34	28,17	66,73	50,53	22,79	1,16	9,88	33,08	7,27	53,99	69,15
19	187,79	81,76	189,80	80,55	111,55	20,32	27,67	5,12	3,22	22,02	58,32	6,58	12,18	27,83	67,03	49,70	22,93	1,21	9,97	33,25	7,42	53,09	68,14
18	187,19	80,98	189,25	79,93	110,90	20,22	27,55	4,92	3,23	22,16	57,47	6,53	12,02	27,49	67,33	48,87	23,07	1,26	10,06	33,42	7,57	52,19	67,13
17	186,59	80,20	188,70	79,31	110,25	20,12	27,43	4,72	3,25	22,30	56,62	6,48	11,86	27,15	67,63	48,04	23,21	1,31	10,15	33,59	7,72	51,29	66,12
16	185,99	79,42	188,15	78,69	109,60	20,02	27,31	4,52	3,27	22,44	55,77	6,43	11,70	26,81	67,93	47,21	23,35	1,36	10,24	33,76	7,87	50,39	65,11
15	185,39	78,64	187,60	78,07	108,95	19,92	27,19	4,32	3,28	22,58	54,92	6,38	11,54	26,47	68,23	46,38	23,49	1,41	10,33	33,93	8,02	49,49	64,10
14	184,79	77,86	187,05	77,45	108,30	19,82	27,07	4,12	3,30	22,72	54,07	6,33	11,38	26,13	68,53	45,55	23,63	1,46	10,42	34,10	8,17	48,59	63,09
13	184,19	77,08	186,50	76,83	107,65	19,72	26,95	3,92	3,31	22,86	53,22	6,28	11,22	25,79	68,83	44,72	23,77	1,51	10,51	34,27	8,32	47,69	62,09
12	183,59	76,30	185,95	76,21	107,00	19,62	26,83	3,72	3,33	23,00	52,37	6,23	11,06	25,45	69,13	43,89	23,91	1,56	10,60	34,44	8,47	46,79	61,08
11	182,99	75,52	185,40	75,59	106,35	19,52	26,71	3,52	3,35	23,14	51,52	6,18	10,90	25,11	69,43	43,06	24,05	1,61	10,69	34,61	8,62	45,89	60,07
10	182,39	74,74	184,85	74,97	105,70	19,42	26,59	3,32	3,36	23,28	50,67	6,13	10,74	24,77	69,73	42,23	24,19	1,66	10,78	34,78	8,77	44,99	59,06
9	181,79	73,96	184,30	74,35	105,05	19,32	26,47	3,12	3,38	23,42	49,82	6,08	10,58	24,43	70,03	41,40	24,33	1,71	10,87	34,95	8,92	44,09	58,05
8	181,19	73,18	183,75	73,73	104,40	19,22	26,35	2,92	3,39	23,56	48,97	6,03	10,42	24,09	70,33	40,57	24,47	1,76	10,96	35,12	9,07	43,19	57,04
7	180,59	72,40	183,20	73,11	103,75	19,12	26,23	2,72	3,41	23,70	48,12	5,98	10,26	23,75	70,63	39,74	24,61	1,81	11,05	35,29	9,22	42,29	56,03
6	179,99	71,62	182,65	72,49	103,10	19,02	26,11	2,52	3,43	23,84	47,27	5,93	10,10	23,41	70,93	38,91	24,75	1,86	11,14	35,46	9,37	41,39	55,02
5	179,39	70,84	182,10	71,87	102,45	18,92	25,99	2,32	3,44	23,98	46,42	5,88	9,94	23,07	71,23	38,08	24,89	1,91	11,23	35,63	9,52	40,49	54,01
4	178,79	70,06	181,55	71,25	101,80	18,82	25,87	2,12	3,46	24,12	45,57	5,83	9,78	22,73	71,53	37,25	25,03	1,96	11,32	35,80	9,67	39,59	53,00
3	178,19	69,28	181,00	70,63	101,15	18,72	25,75	1,92	3,47	24,26	44,72	5,78	9,62	22,39	71,83	36,42	25,17	2,01	11,41	35,97	9,82	38,69	52,00
2	177,59	68,50	180,45	70,01	100,50	18,62	25,63	1,72	3,49	24,40	43,87	5,73	9,46	22,05	72,13	35,59	25,31	2,06	11,50	36,14	9,97	37,79	50,99
1	176,99	67,72	179,90	69,39	99,85	18,52	25,51	1,52	3,51	24,54	43,02	5,68	9,30	21,71	72,43	34,76	25,45	2,11	11,59	36,31	10,12	36,89	49,98

System for Control of the Physical Development and
the Specific Capability of University Students Training Basketball in Turkey

Guards

Points	INDICATORS																							
	1	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
50	193,77	97,65	194,65	94,63	119,50	21,31	29,85	8,63	2,61	17,82	76,25	7,96	16,12	39,44	57,39	74,12	17,87	0,10	6,93	28,29	4,39	80,77	92,37	
49	193,32	96,85	194,20	94,13	119,10	21,26	29,75	8,47	2,63	17,90	75,70	7,91	15,95	39,09	57,61	73,52	17,99	0,13	7,01	28,43	4,47	79,97	91,56	
48	192,87	96,05	193,75	93,63	118,70	21,21	29,64	8,31	2,64	17,99	75,15	7,86	15,77	38,74	57,83	72,92	18,11	0,17	7,09	28,58	4,55	79,17	90,75	
47	192,42	95,25	193,30	93,13	118,30	21,16	29,54	8,15	2,66	18,07	74,60	7,81	15,60	38,39	58,05	72,32	18,23	0,20	7,17	28,72	4,63	78,37	89,94	
46	191,97	94,45	192,85	92,63	117,90	21,11	29,43	7,99	2,67	18,16	74,05	7,76	15,42	38,04	58,27	71,72	18,35	0,24	7,25	28,86	4,71	77,57	89,13	
45	191,52	93,65	192,40	92,13	117,50	21,06	29,33	7,83	2,69	18,24	73,50	7,71	15,25	37,69	58,49	71,12	18,48	0,27	7,33	29,01	4,79	76,77	88,32	
44	191,07	92,85	191,95	91,63	117,10	21,01	29,23	7,67	2,71	18,33	72,95	7,66	15,07	37,34	58,71	70,52	18,60	0,31	7,41	29,15	4,87	75,97	87,51	
43	190,62	92,05	191,50	91,13	116,70	20,96	29,12	7,51	2,72	18,41	72,40	7,61	14,90	36,99	58,93	69,92	18,72	0,34	7,49	29,29	4,95	75,17	86,70	
42	190,17	91,25	191,05	90,63	116,30	20,91	29,02	7,35	2,74	18,50	71,85	7,56	14,72	36,64	59,15	69,32	18,84	0,38	7,57	29,44	5,03	74,37	85,89	
41	189,72	90,45	190,60	90,13	115,90	20,86	28,91	7,19	2,75	18,58	71,30	7,51	14,55	36,29	59,37	68,72	18,96	0,41	7,65	29,58	5,11	73,57	85,08	
40	189,27	89,65	190,15	89,63	115,50	20,81	28,81	7,03	2,77	18,67	70,75	7,46	14,37	35,94	59,59	68,12	19,09	0,45	7,73	29,72	5,19	72,77	84,27	
39	188,82	88,85	189,70	89,13	115,10	20,76	28,71	6,87	2,79	18,75	70,20	7,41	14,20	35,59	59,81	67,52	19,21	0,48	7,81	29,86	5,27	71,97	83,46	
38	188,37	88,05	189,25	88,63	114,70	20,71	28,60	6,71	2,80	18,84	69,65	7,36	14,02	35,24	60,03	66,92	19,33	0,52	7,89	30,01	5,35	71,17	82,65	
37	187,92	87,25	188,80	88,13	114,30	20,66	28,50	6,55	2,82	18,92	69,10	7,31	13,85	34,89	60,25	66,32	19,45	0,55	7,97	30,15	5,43	70,37	81,84	
36	187,47	86,45	188,35	87,63	113,90	20,61	28,39	6,39	2,83	19,01	68,55	7,26	13,67	34,54	60,47	65,72	19,57	0,59	8,05	30,29	5,51	69,57	81,03	
35	187,02	85,65	187,90	87,13	113,50	20,56	28,29	6,23	2,85	19,09	68,00	7,21	13,50	34,19	60,69	65,12	19,70	0,62	8,13	30,44	5,59	68,77	80,22	
34	186,57	84,85	187,45	86,63	113,10	20,51	28,19	6,07	2,87	19,18	67,45	7,16	13,32	33,84	60,91	64,52	19,82	0,66	8,21	30,58	5,67	67,97	79,41	
33	186,12	84,05	187,00	86,13	112,70	20,46	28,08	5,91	2,88	19,26	66,90	7,11	13,15	33,49	61,13	63,92	19,94	0,69	8,29	30,72	5,75	67,17	78,60	
32	185,67	83,25	186,55	85,63	112,30	20,41	27,98	5,75	2,90	19,35	66,35	7,06	12,97	33,14	61,35	63,32	20,06	0,73	8,37	30,87	5,83	66,37	77,79	
31	185,22	82,45	186,10	85,13	111,90	20,36	27,87	5,59	2,91	19,43	65,80	7,01	12,80	32,79	61,57	62,72	20,18	0,76	8,45	31,01	5,91	65,57	76,98	
30	184,77	81,65	185,65	84,63	111,50	20,31	27,77	5,43	2,93	19,52	65,25	6,96	12,62	32,44	61,79	62,12	20,31	0,80	8,53	31,15	5,99	64,77	76,17	
29	184,32	80,85	185,20	84,13	111,10	20,26	27,67	5,27	2,95	19,60	64,70	6,91	12,45	32,09	62,01	61,52	20,43	0,83	8,61	31,29	6,07	63,97	75,36	
28	183,87	80,05	184,75	83,63	110,70	20,21	27,56	5,11	2,96	19,69	64,15	6,86	12,27	31,74	62,23	60,92	20,55	0,87	8,69	31,44	6,15	63,17	74,55	
27	183,42	79,25	184,30	83,13	110,30	20,16	27,46	4,95	2,98	19,77	63,60	6,81	12,10	31,39	62,45	60,32	20,67	0,90	8,77	31,58	6,23	62,37	73,74	
26	182,97	78,45	183,85	82,63	109,90	20,11	27,35	4,79	2,99	19,86	63,05	6,76	11,92	31,04	62,67	59,72	20,79	0,94	8,85	31,72	6,31	61,57	72,93	

<u>25</u>	<u>182.52</u>	<u>77.65</u>	<u>183.40</u>	<u>82.13</u>	<u>109.50</u>	<u>20.06</u>	<u>27.25</u>	<u>4.63</u>	<u>3.01</u>	<u>19.94</u>	<u>62.50</u>	<u>6.71</u>	<u>11.75</u>	<u>30.69</u>	<u>62.89</u>	<u>59.12</u>	<u>20.92</u>	<u>0.97</u>	<u>8.93</u>	<u>31.87</u>	<u>6.39</u>	<u>60.77</u>	<u>72.12</u>
24	182,07	76,85	182,80	81,53	109,10	19,95	27,15	4,51	3,04	20,03	61,95	6,66	11,57	30,34	63,11	58,22	21,04	1,01	9,01	32,01	6,53	60,22	71,21
23	181,62	76,05	182,20	80,93	108,70	19,85	27,04	4,39	3,06	20,11	61,40	6,61	11,40	29,99	63,33	57,32	21,16	1,04	9,09	32,15	6,67	59,67	70,30
22	181,17	75,25	181,60	80,33	108,30	19,75	26,94	4,27	3,09	20,20	60,85	6,56	11,22	29,64	63,55	56,42	21,28	1,08	9,17	32,30	6,81	59,12	69,39
21	180,72	74,45	181,00	79,73	107,90	19,65	26,83	4,15	3,12	20,28	60,30	6,51	11,05	29,29	63,77	55,52	21,40	1,11	9,25	32,44	6,95	58,57	68,48
20	180,27	73,65	180,40	79,13	107,50	19,54	26,73	4,03	3,15	20,37	59,75	6,46	10,87	28,94	63,99	54,62	21,53	1,15	9,33	32,58	7,09	58,02	67,57
19	179,82	72,85	179,80	78,53	107,10	19,44	26,63	3,91	3,17	20,45	59,20	6,41	10,70	28,59	64,21	53,72	21,65	1,18	9,41	32,72	7,23	57,47	66,66
18	179,37	72,05	179,20	77,93	106,70	19,34	26,52	3,79	3,20	20,54	58,65	6,36	10,52	28,24	64,43	52,82	21,77	1,22	9,49	32,87	7,37	56,92	65,75
17	178,92	71,25	178,60	77,33	106,30	19,23	26,42	3,67	3,23	20,62	58,10	6,31	10,35	27,89	64,65	51,92	21,89	1,25	9,57	33,01	7,51	56,37	64,84
16	178,47	70,45	178,00	76,73	105,90	19,13	26,31	3,55	3,25	20,71	57,55	6,26	10,17	27,54	64,87	51,02	22,01	1,29	9,65	33,15	7,65	55,82	63,93
15	178,02	69,65	177,40	76,13	105,50	19,03	26,21	3,43	3,28	20,79	57,00	6,21	10,00	27,19	65,09	50,12	22,14	1,32	9,73	33,30	7,79	55,27	63,02
14	177,57	68,85	176,80	75,53	105,10	18,92	26,11	3,31	3,31	20,88	56,45	6,16	9,82	26,84	65,31	49,22	22,26	1,36	9,81	33,44	7,93	54,72	62,11
13	177,12	68,05	176,20	74,93	104,70	18,82	26,00	3,19	3,33	20,96	55,90	6,11	9,65	26,49	65,53	48,32	22,38	1,39	9,89	33,58	8,07	54,17	61,20
12	176,67	67,25	175,60	74,33	104,30	18,72	25,90	3,07	3,36	21,05	55,35	6,06	9,47	26,14	65,75	47,42	22,50	1,43	9,97	33,73	8,21	53,62	60,29
11	176,22	66,45	175,00	73,73	103,90	18,62	25,79	2,95	3,39	21,13	54,80	6,01	9,30	25,79	65,97	46,52	22,62	1,46	10,05	33,87	8,35	53,07	59,38
10	175,77	65,65	174,40	73,13	103,50	18,51	25,69	2,83	3,42	21,22	54,25	5,96	9,12	25,44	66,19	45,62	22,75	1,50	10,13	34,01	8,49	52,52	58,47
9	175,32	64,85	173,80	72,53	103,10	18,41	25,59	2,71	3,44	21,30	53,70	5,91	8,95	25,09	66,41	44,72	22,87	1,53	10,21	34,15	8,63	51,97	57,56
8	174,87	64,05	173,20	71,93	102,70	18,31	25,48	2,59	3,47	21,39	53,15	5,86	8,77	24,74	66,63	43,82	22,99	1,57	10,29	34,30	8,77	51,42	56,65
7	174,42	63,25	172,60	71,33	102,30	18,20	25,38	2,47	3,50	21,47	52,60	5,81	8,60	24,39	66,85	42,92	23,11	1,60	10,37	34,44	8,91	50,87	55,74
6	173,97	62,45	172,00	70,73	101,90	18,10	25,27	2,35	3,52	21,56	52,05	5,76	8,42	24,04	67,07	42,02	23,23	1,64	10,45	34,58	9,05	50,32	54,83
5	173,52	61,65	171,40	70,13	101,50	18,00	25,17	2,23	3,55	21,64	51,50	5,71	8,25	23,69	67,29	41,12	23,36	1,67	10,53	34,73	9,19	49,77	53,92
4	173,07	60,85	170,80	69,53	101,10	17,89	25,07	2,11	3,58	21,73	50,95	5,66	8,07	23,34	67,51	40,22	23,48	1,71	10,61	34,87	9,33	49,22	53,01
3	172,62	60,05	170,20	68,93	100,70	17,79	24,96	1,99	3,60	21,81	50,40	5,61	7,90	22,99	67,73	39,32	23,60	1,74	10,69	35,01	9,47	48,67	52,10
2	172,17	59,25	169,60	68,33	100,30	17,69	24,86	1,87	3,63	21,90	49,85	5,56	7,72	22,64	67,95	38,42	23,72	1,78	10,77	35,16	9,61	48,12	51,19
1	171,72	58,45	169,00	67,73	99,90	17,59	24,75	1,75	3,66	21,98	49,30	5,51	7,55	22,29	68,17	37,52	23,84	1,81	10,85	35,30	9,75	47,57	50,28

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