

CISM INTERNATIONAL SYMPOSIUM
PRETORIA - SOUTH AFRICA
1996

TRAINING OF CONSCRIPTS IN THE DANISH ARMED FORCES

Colonel I.G. FOGT (Denmark)

Ladies and Gentlemen,

First let me express my gratitude to the organizers for giving me time in this distinguished symposium to give you some information about training in the armed forces in such a small country as Denmark. μ

My lecture is based on scientific studies and reports, but in this lecture I will keep it very simple. In Denmark we have spent a lot of time breaking down the scientific results into handy "tools" (in brackets) - "tools" easy for the instructors to use and proved effectively in training. I believe that such tools and the way we use them can be valuable for this audience.

As a trained instructor I should first of all make sure that geography, time etc. is known to make my audience feel comfortable.

Annex 1

We are far away from Denmark. On this map of Europe it is easy to find my country. Denmark covers only 43.000 sq.kilometres. South Africa is 30 times larger. Should you transpose a map of South Africa onto this map it would cover Denmark, Germany, France, the Netherlands and Great Britain. Denmark has 5 millions inhabitants, and seen from a military point of view it is easy to understand the strategic role played during the cold war. Denmark was the cork in the Baltic preventing the Russian and Polish fleets reaching the Atlantic Ocean. In those days (that is only 7 years ago) the Polish landing crafts were only 40 k from the Danish coastline. Now the Danish straits are passed by approximately 50.000 ships each year.

Annex 2.

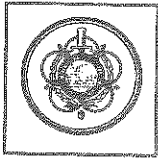
Let us focus a little on this vofoil. Here we have Scandinavia which includes Norway, Finland and Denmark. Norway and Sweden are big countries but have very small populations, 4,2 and 8,4 millions respectively.

Annex 3.

Back to Denmark. From North to South is approximately 300 k and from East to West approximately 225 k. Denmark consists of the large peninsula of Jutland -here you have only land-border with Germany. The rest of Denmark consists of 406 islands connected by numerous bridges and ferries. We are building the biggest bridge in the world - it is the bridge over the Great Belt (26 k). We are all close to the salt water, no Dane lives more than 52 k from the sea, and we have a coastline of 7.314 k - rather long for such a small country. The terrain is flat, the highest point being only 180 above the sealevel. However it is agricultural land, with small hills, many forests, streams and lakes.

It is very nearly spring in Denmark now. We still have some snow in the fields and the temperature is about +8 C° in daytime, dropping to zero at night. We have had a very hard winter, which is not normal, last time it was so severe was 9 years ago.

Normally we have only a few days of snow in the winter, with one or two weeks with temperatures below zero. These mild conditions for a country so far North are due to the warm waters we have around us. When the temperature in the waters surrounding Denmark get low we really have winter in Denmark and the Belts freeze, we all freeze.



So much for putting you in the picture with regard to my country. Now some information about the Danish Armed Forces.

These forces consists of Army, Navy, Air Force, and a Home Guard.

Denmark has compulsory military service and the Danish defence relies on mobilization. In peacetime the active forces are a mixture of enlisted officers, professional NCO's and soldiers, conscripts (NCO's and privates) and civilians.

Annex 4

Professionals:

Officers.....4.578
NCO's.....5.412
Privates.....9.046.....total 19.036

Conscripts:

NCO's.....1.552
Privates.....8.782.....total 10.334
Civilians.....total 9.432

Total.....38.802

After mobilisation (24 hours).....100.000
+ mobilisation of Home Guard.....70.000

The Danish towards NATO is very pro (73%), and to be a soldier in Denmark is looked upon in a very positive way. The soldiers have a good salary, and in Denmark you can walk in the streets in your uniform without being abused or insulted.

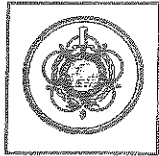
Compulsory service (Conscription) in Denmark is 10 -12 months depending on which service you are selected for. Not all young men are drafted, some are rejected because of physical or mental shortcomings, and some are exempt service because they pull a free-number in the lottery. We have this lottery to keep the number of soldiers required in line with the number set by the politicians. If a young man (without physical or mental shortcomings) draws a free-number, but declares, that he wants to become a soldier, the law gives the right to do so, and the free-number is put back into the lottery for another man to pull. The positive attitude being a soldier can be seen from the fact that a large number of young men, having drawn a free-number, still insist on entering the service.

So after this selection we train 10.300 young conscripts every year to be soldiers. The training period is approximately 8 months, after which the soldier must be able to fill his place in his unit, the rest of the compulsory time (2 - 4 months) he will spend being in his unit on exercises, in shooting areas etc..

Physical training is very important part of the training, not only in the first 8 months but throughout the entire compulsory service. We have initiated some standards or goals that a soldier must be able to pass before he is sent home. These goals have been set after an analysis of the different functions he must be able to fulfil, taking into consideration the stress-factor in battle, reports from countries with more war experience, etc. In the two past years we also had the chance to see how physical training of soldiers is done in Poland and in the Baltic States and the goal they aim for.

The goals for the conscripts in Denmark are:

Annex 5



In sports clothes:

- warming up programme;
- 5 k running (terrain) in 25 minutes 00 sec;
- muscular test (test N°2) (gymnasium) to score: 3,0;
- international obstacle course (500 m, 20 obst.): 4 min 40 sec.

In battledress + rifle:

- 15 k march (terrain) 2 hours 50 minutes;
- test N°40: physical test for unit.

Annex 6

Muscular test (test N°2). I will show you a vufoil on this. The soldier will, after warning up do as many repetitions of each exercise as possible, and the average score must be 3,0 or higher. I will gladly go into details later, and I will give you the test on paper after my lecture.

Annex 7

In the physical test for the unit (test N°40) the soldier will be tested in organised groups of 8 - 12 men. All members of the unit (e.g. commander, second commander, platoon leaders, etc) will participate. The test consists of 5 different tests which the group must pass with only a short break of 10 minutes after each test.

The five tests all in battledress + rifle are:

- 10 k march/run in 80 minutes 00sec (road/terrain);
- pulling (25) /carrying (50) another soldier in all 75 m;
- close combat path with 5 emerging enemy situations;
- grenade throwing test on different targets;
- obstacle course in group.

This is a very good physical test for the unit, we have spent a lot of time devising this test. The score system has been put on disc to be used in computers. I will go deeper into this test during discussion time should you so wish. You will not receive a written copy of the test as we have not translated it into English.

Annex 5

So this is the final physical goals we want the conscripts in Denmark to achieve before we sent them home after the compulsory service.

Annex 3

I will now take you back to Wonderful Copenhagen. Denmark is such a small country, that we have only Military Physical Training School, this is the one I command and where Major Overgaard is the Chief of Education.

Annex 8

This is my school. At this school we educate physical instructors for all three services - Army, Navy and Air Force. We run a number of different courses, the most important are:



Annex 9

- Courses for Assistant Instructors (4 weeks), 260 students pr.year;
- Courses for Company Instructors (3 1/2 months), 52 students pr.year;
- Course for Sports Officers, 6 months, 12 students pr.year.

The units send their officers and NCO's to my school and after they have finished the course they are sent back to their units where the Company Instructor and the Assistant Instructors (all NCP's) have their normally war-function job and as supplement to that they have the physical instructor job for daily training. The Sports Officers of the Regiment, the Air Base, the Naval Station, the Officers School or the Sergeant School will be the supervisor of all sport within his unit. Also it is the Sport Officer's job to arrange sport events.

As you can see from this, the background for all physical training in the Danish Armed Forces is done at my school. We educate all instructors in this field, we help the Commanders of the Army, Navy and Air Force to set the goal for the soldiers and also it is my duty to inspect all units to make sure that the goals are obtained. It means, that I have a set-up of 4 officers (majors, captains) to plan for and to join me on inspection tours to all units in Denmark including Greenland and the Faero Islands. This means travelling 70 - 80 days a year.

Back to the conscripts. Let us now have a look at the young men of yesterday and today.

Annex 10 a

If - in Denmark - you go approximately 25 years back in time you would have seen this picture of the physical capability of the conscripts. In those days some 10 - 15% were in a very bad physical condition, approx. 75 - 80 were in the middle group, and 10 -15% were in a very good condition.

Annex 10 b

This picture has changed considerably today. This is how it is now. Something like 55% are in a very bad physical condition with only 25% in the middle group and 20% in good condition.

The changes can be explained. The activities for teenagers have dramatically changed in the last 10 -15 years. In Denmark it is almost a "must" to have your own house, however houses are so expensive that both parents go out work. This means the children are brought up in kindergartens/nursery schools and when they start school they go to after-school-centres. So in reality they are mostly brought up by teachers and helpers in these institutions and in Denmark that means mainly women, 98% of these teachers are women.

Teachers are responsible for the children, so no dangerous games are played, the boys do not climb trees, they do not cycle around the town, they do not play wild games in the forests, they do not fight and so on. They are brought up to behave like sweet little girls. They are soft, they whimper and do not learn how to use their muscles. Maybe I exaggerate a little - but when I put it this way it is easier to understand why the danish (male) conscripts is in such a bad physical condition.

In public schools the physical training is reduced to 1 - 2 hours pr.week, and those hours are looked upon as more as hours of recreation than hours of intensive training. The modern educational system is more "laisser-faire" than ever before, so if little Peter does not want to participate, he can refuse to do so.

After school hours and at the after-school-centres the children watch television or they play computer games.



In all, 50% of the younger generation get very little physical training, the young boys are not brought up to be strong young men, and they don't seem to care, because they have been brought up by female teachers. However they learnt to be nice, gentle and caring!

A small group of young boys (20%) train in clubs after school hours and they are normally in an extraordinary good physical condition because the training at the clubs today is of a very high standard.

When we receive the recruits in the regiments, on the naval Stations and at the Air Forces Bases we therefore must realize this:

- we have a very great variation in physical standards, some are in a very good condition, some are in medium condition, but about 50% will probably be in a very poor condition.
- this 50% will be characterized by:

Annex 11

- * very poor endurance
- * very little muscular powder
- * poor mobility of the joints (short muscles)
- * poorly developed coordination system
- * poor power of resistance ("soft")

As you can imagine it is problematic to start training with such a unit. We do not want to injure the soldiers by overloading the training - it is costly to send a soldier home after 4 - 5 weeks, on the other hand, the commander of the unit wants his unit to be fit as soon as possible.

We have found it is necessary to introduce some limitations in the working load during the first period of training. The young men normally wear jogging shoes weighing approx. 300 gram each. The Danish military boot is 1100 grams, so to have boots on puts a serious strain on the untrained muscles. In the first three weeks the soldiers only wear boots 3 - 4 hours pr. day. Military equipment in Denmark, including rifle weighs 12 kg, this must be introduced to the soldier piece by piece over a 5 weeks period.

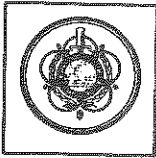
The Company Instructor is trained to help the Unit Commander calculate the physical strain-factor from the exercise schedule and to propose alternatives should the training prove to be too intensive.

The Company Instructor starts the physical training in the unit and in the first two weeks the soldiers will receive a lot of training just so that they have to march from place to place. A few lessons in sports clothes will take place, not demanding lessons, but lessons to acquaint the soldiers with the sport facilities and with their own physical training situation.

After two weeks the regular training starts. Let us, as an example take a look at a Company.

Annex 12

The endurance training will start with a 12 minute test. After a good warming up session (platoon by platoon) will run as far as possible in 12 minutes. For this purpose we have an 800 m course with distance markers every 50 meters. You will see a very big difference in the results. Some soldiers can run more than 3500 m while others only manage to do 1800 m or even less. When the whole Company has finished this initial test, it is divided into running-groups, in this example into 10 groups A - K. The Company Instructor now makes an endurance programme for the next 2 months, based on the results from the 12 min. test. For this he uses:



Annex 13

In the first 4 months we as a rule only use interval and long term training. The first number in the interval training indicates the running period, the second number is the active rest period.
Example: 4+2 training for the 2200 m group, they will run 725 m in 4 minutes, then walk for 2 minutes, and then run again 725 m in 4 minutes and so on. They will do 6 times. If you do this on the 800 m track it is easy to control. As a rule the NCO's run along with their teams.

The Company trains 5 hours a week and in these hours they will have 3 running lessons with the programme of various interval and long term training.

After 2 months the Company Instructor will have a new 12 minute test, divide the Company into new groups (A -K) and continue with the training.

After 4 months the endurance training will also include lactic acid training (necessary for the obstacle course test) and training in uniform and boots and with more and more equipment.

Annex 6

For muscle training we use the same system. The initial test will be done after 2 weeks using test N°2 and according to the test results the Company will be divided into muscle training groups A - K.

Annex 14

Now the Company is ready for the muscular training. Here we also have a special method to balance the workload.

Annex 15

If you are able, with all your force engaged, to do an exercise only once, you have the definition of muscle power (100%). If you train with loads so heavy, that you can only do 1 - 3 repetitions we call this brute strength training. The exercises are slow, and you can only do a few training rounds before complete exhaustion.

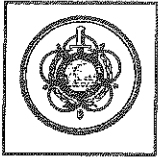
If you are able to do an exercise more than 12 times, you are not really training muscle power, you are training local muscle endurance.

This means, that in muscular training we want to train what we call explosion-power, which means that the workload allows you to train with a speed sufficient for tumbling your own body and sufficient for the job you are going to do. From the vufoil you can see that it means a workload that gives you 4 - 12 repetitions. So we have invented the 4 - 12 system.

- find an exercise for the muscle group that you can do at least 4 times;
- train and try to do more than 4 repetitions;
- when stop, fill up to 12 with an easier exercise for the same muscle group;
- when you can do 12 repetitions, find a new exercise for the muscle group so you again do only 4 repetitions.

In muscle training we underline the training of the following muscle groups ("the 5 major groups"):

- arm benders-shoulder lowers (biceps brachi, latissimus dorsi);
- arm stretchers-shoulders lifters (triceps, levator scapulae);
- abdominal-hip benders (abdominals, psoas-major);



- backbone stretchers (longissimus dorsi);
- knee stretchers-hip stretchers (quadriceps femoris, gluteus).

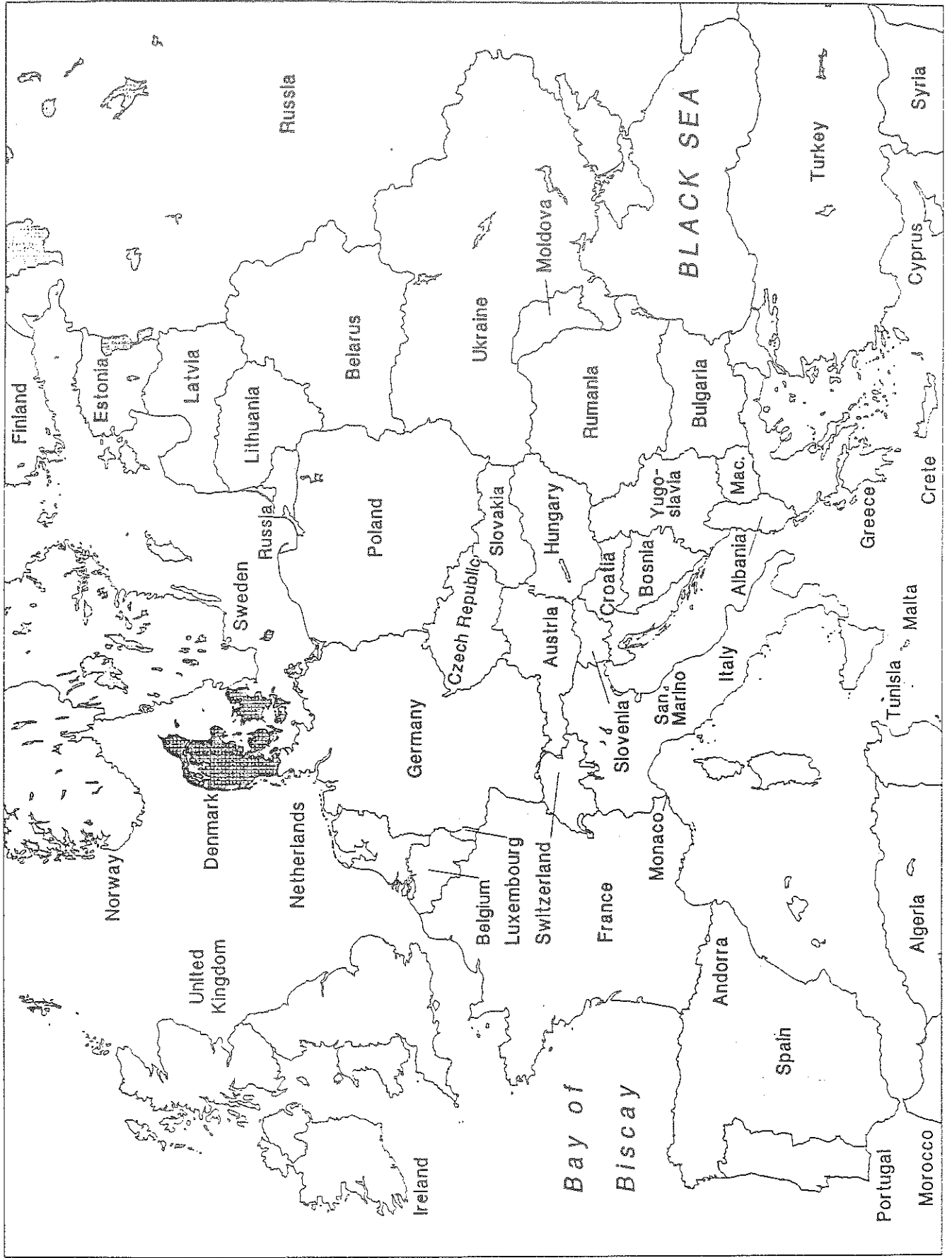
When all groups in the Company have reached a satisfactory level in endurance and muscle power the training in special techniques begins. This is normally after 3-4 months of basic training. The obstacle course running, the grenade throwing, the close combat techniques are now trained in lessons combined with the continued training in the basic elements of endurance and muscle power.

Annex 5

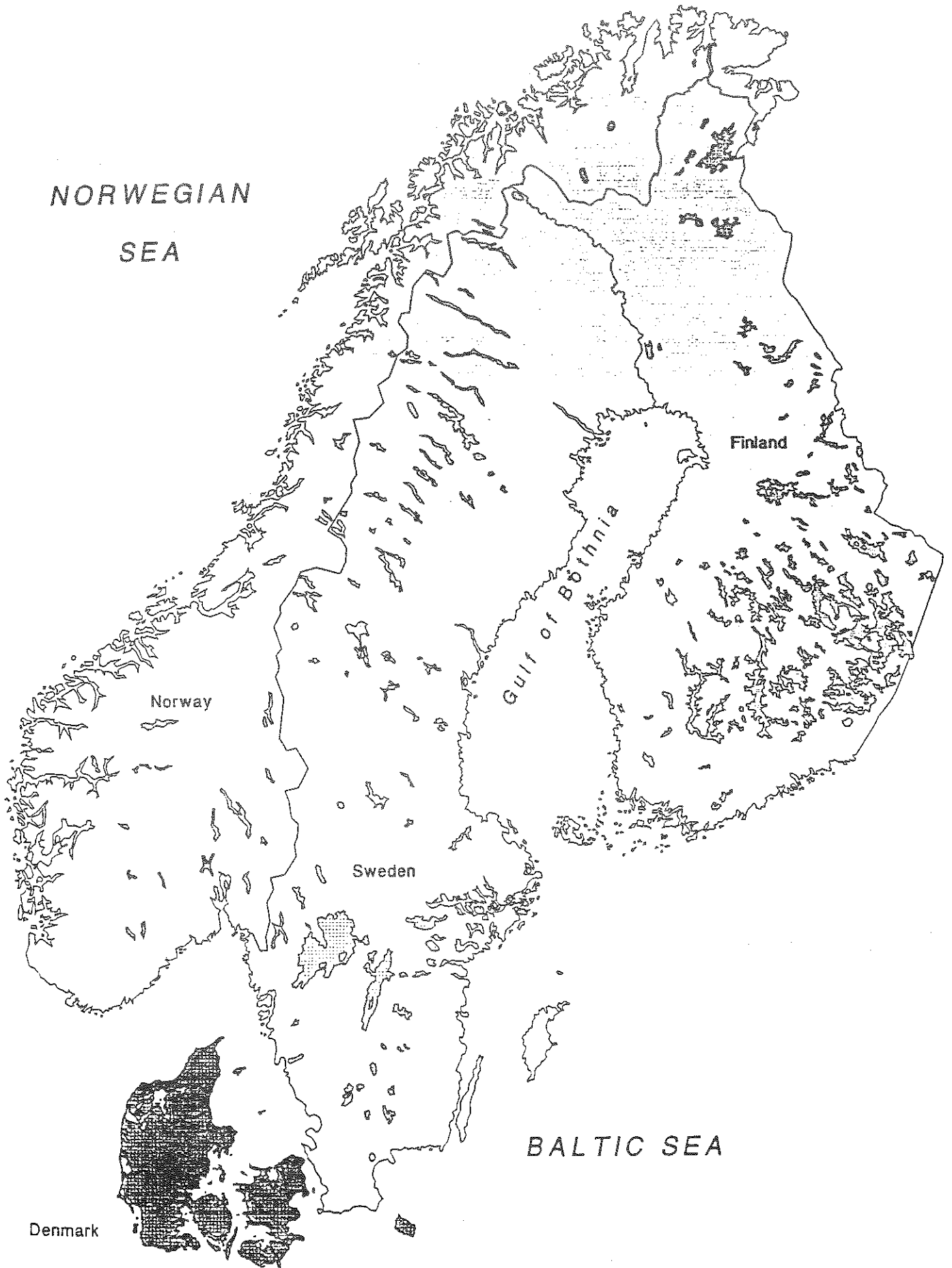
From my inspections I can tell you that between 90 - 95% of all Danish conscripts pass the final tests.

Ladies and gentlemen. This concludes the first and longest part of my lecture. Thank you for your attention.

Scaled to Central Europe (Mercator Projection)



Scandinavia (Conic Projection)



NORWEGIAN
SEA

Finland

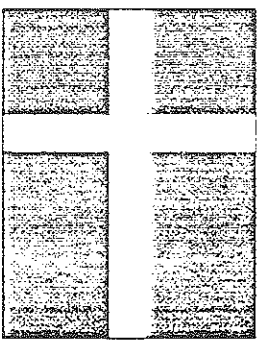
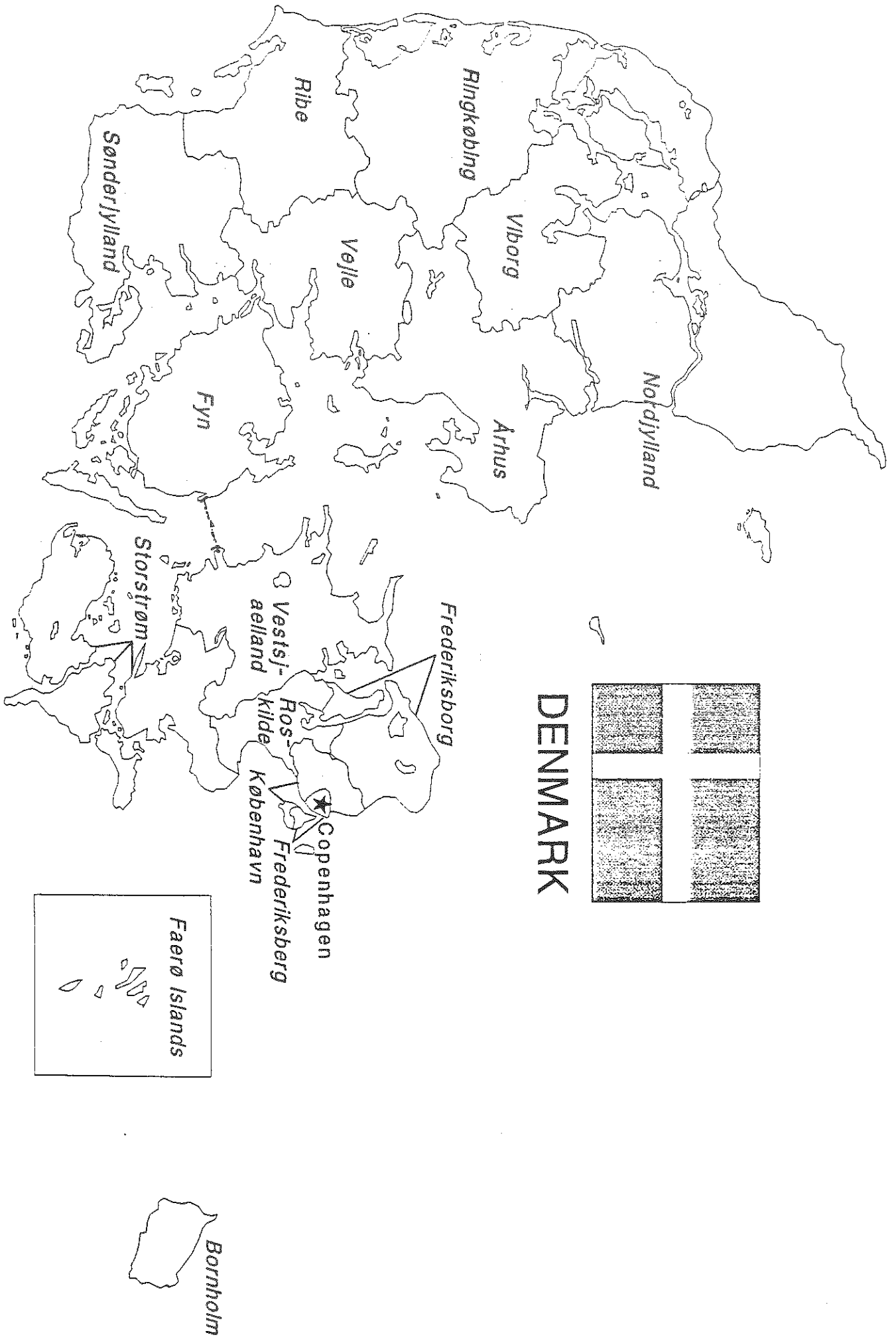
Norway

Gulf of Bothnia

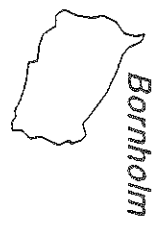
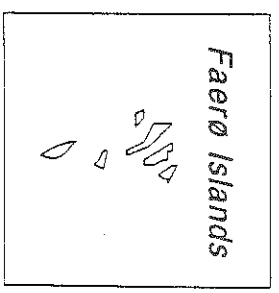
Sweden

BALTIC SEA

Denmark



DENMARK



THE DANISH ARMED FORCES

PROFESSIONALS:

OFFICERS.....	: 4.578	
NCO`S	: 5.412	
PRIVATES.....	: 9.046	...TOTAL: 19.036

CONSCRIPTS:

NCO`S	: 1.552	
PRIVATES.....	: 8.782	...TOTAL: 10.334

CIVILIANS	TOTAL: 9.432
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GRAND TOTAL	: 38.802
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AFTER MOBILISATION (24 HOURS).....	: 100.000
+ MOBILISATION OF THE HOME GUARD	: 70.000

PHYSICAL GOALS FOR THE DANISH SOLDIERS

IN SPORTS CLOTHES:

- WARMING UP PROGRAM
- 5 KM. RUNNING (TERRAIN) IN 25 MIN.00 SEC.
- MUSCULAR TEST NR.2, SCORE 3,0
- INTERNATIONAL OBSTACLE COURSE 4 MIN.40 SEC.

IN BATTLEDRESS + RIFLE:

- 15 KM. MARCH TERRAIN 2 HOURS 50 MINUTES
- TEST NR. 40: PHYSICAL TEST FOR UNITS

HRN BBU KPR

SCORINGSKORT







HRN 202

Bilag

MUSKELSTYRKE-/UDHOLDENHED

Prøve 2

NAVN: _____ ENHED: _____ DEL: _____

NR.	ØVELSE	ANTAL - KARAKTER			DATO:		DATO:		DATO:	
					ANTAL	KARAKTER	ANTAL	KARAKTER	ANTAL	KARAKTER
1		0 - 0,00								
		1 - 1,00								
		2 - 2,00								
		3 - 2,50								
		4 - 3,00								
		5 - 3,50								
		6 - 4,00								
		7 - 4,50								
		over								
		7 - 5,00								
2		0 = 0,0	13 = 1,7	26 = 3,6						
		1 = 0,1	14 = 1,9	27 = 3,7						
		2 = 0,3	15 = 2,0	28 = 3,8						
		3 = 0,4	16 = 2,1	29 = 4,0						
		4 = 0,5	17 = 2,3	30 = 4,1						
		5 = 0,6	18 = 2,4	31 = 4,3						
		6 = 0,8	19 = 2,6	32 = 4,4						
		7 = 0,9	20 = 2,7	33 = 4,6						
		8 = 1,0	21 = 2,9	34 = 4,7						
		9 = 1,1	22 = 3,0	35 = 4,8						
		10 = 1,3	23 = 3,1							
		11 = 1,4	24 = 3,3							
		12 = 1,6	25 = 3,4	over						
		35 = 5,0								
3		0 - 0,0	10 - 1,8	20 - 3,8						
		1 - 0,2	11 - 2,0	21 - 4,0						
		2 - 0,3	12 - 2,2	22 - 4,2						
		3 - 0,5	13 - 2,4	23 - 4,4						
		4 - 0,7	14 - 2,6	24 - 4,6						
		5 - 0,8	15 - 2,8	25 - 4,8						
		6 - 1,0	16 - 3,0	over						
		7 - 1,2	17 - 3,2	25 - 5,0						
		8 - 1,4	18 - 3,4							
		9 - 1,6	19 - 3,6							
4		1. serie:	5. serie:							
		10 b = 0,6	10 b = 4,1							
		10 s = 1,2	10 s = 4,3							
		2. serie:	6. serie:							
		10 b = 1,8	10 b = 4,5							
		10 s = 2,4	10 s = 4,7							
		3. serie:	7. serie:							
		10 b = 3,0	10 b = 4,9							
		10 s = 3,3	10 s = 5,0							
		4. serie:	b: Knæbøjn.							
10 b = 3,6	s: Sek.1 "90"									
10 s = 3,9										
5		0 - 0,0	10 - 1,0	40 - 4,0						
		1 - 0,1	11 - 1,1	41 - 4,1						
		2 - 0,2	15 - 1,5	45 - 4,5						
		3 - 0,3	19 - 1,9	49 - 4,9						
		4 - 0,4	20 - 2,0	50 - 5,0						
		5 - 0,5	21 - 2,1							
		6 - 0,6	25 - 2,5	Hvert sek						
		7 - 0,7	29 - 2,9	er = 0,1						
		8 - 0,8	30 - 3,0	points						
		9 - 0,9	31 - 3,1	Eks.:						
	35 - 3,5	37 sek =								
	39 - 3,9	3,7 point								
6		1 - 0,3	7 - 2,0	13 - 4,0						
		2 - 0,5	8 - 2,3	14 - 4,3						
		3 - 0,8	9 - 2,7	15 - 4,7						
		4 - 1,0	10 - 3,0	over						
		5 - 1,3	11 - 3,3	15 - 5,0						
		6 - 2,7	12 - 3,7							
BEREGNING: Slutkarakteren beregnes ved indsættelse af de opnåede enkeltkarakterer i skemaet.		$\lambda: (\text{ØV } 1+5):2 =$	$(\text{ØV}1+5):2 =$	$(\text{ØV}1+5):2 =$	$(\text{ØV}1+5):2 =$					
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		$A+B = \text{SUM}$	$\lambda + B =$	$\lambda + B =$	$\lambda + B =$					
		$(\text{SUM} \times 2):10 = \text{SLUTKARAKTER}$	$(\quad \times 2):10 =$	$(\quad \times 2):10 =$	$(\quad \times 2):10 =$					

7

TEST 40:

PHYSICAL TEST FOR UNITS

1. 10 KM MARCH/RUN IN 80 MINUTES 00 SEC.
2. PULLING (25)+CARRYING (50) ANOTHER SOLDIER 75 M.
3. CLOSE COMBAT PATH WITH 5 ENEMY SITUATIONS
4. GRENADE THROWING TEST ON DIFFERENT TARGETS
5. OBSTACLE COURSE IN GROUP

ALL IN BATTLEDRESS + RIFLE

ALL IN ONE DAY, 10 MINUTES BRAKE BETWEEN THE TESTS

COURSES FOR PHYSICAL TRAINING INSTRUCTORS

IN THE DANISH MILITARY SPORTS SCHOOL

ASSISTENT INSTRUCTORS COURSE

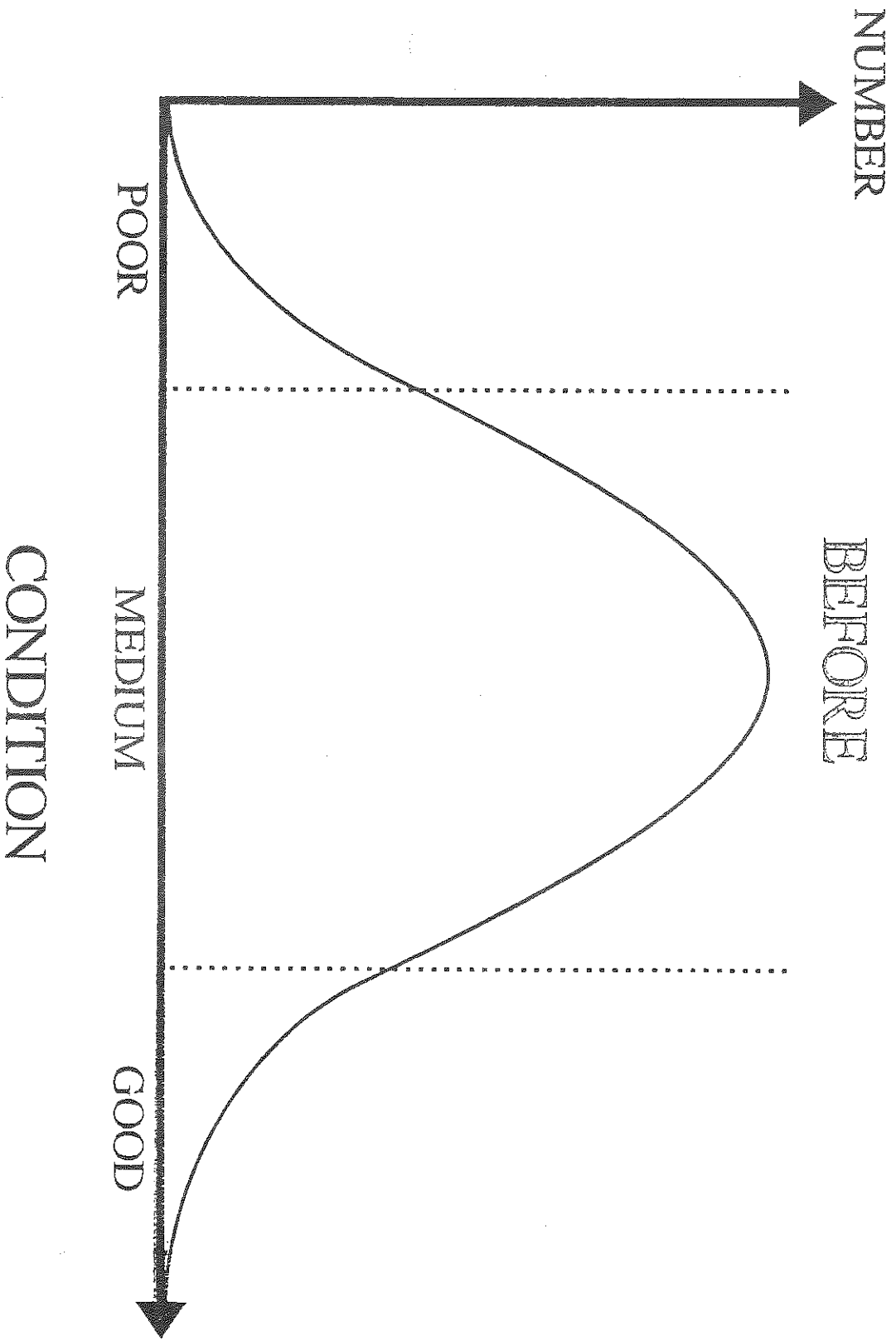
(4 WEEKS, JUNIOR NCO`S)

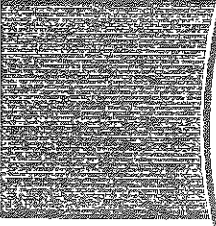
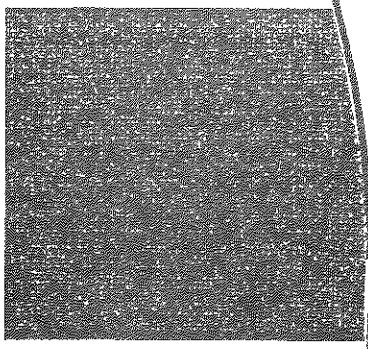
COMPANY INSTRUCTORS COURSE

(3½ MONTHS, OFFICERS + SENIOR NCO`S)

SPORTS OFFICERS COURSE

(6 MONTHS, OFFICERS AFTER COMPANY
INSTRUCTORS COURSE)





MON



CHARACTERISTICS FOR THE DANISH CONSCRIPTS AT
THEIR FIRST MEETING FOR MILITARY SERVICE

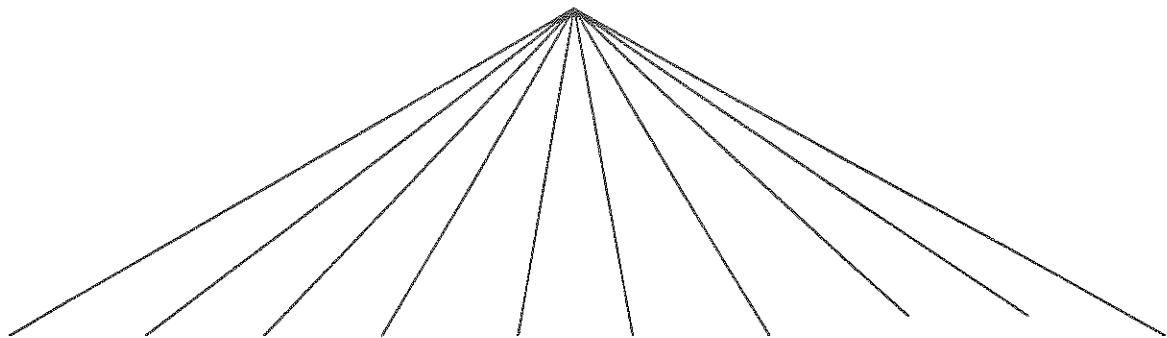
- VERY POOR ENDURANCE
- VERY LITTLE MUSCLE POWER
- POOR MOBILITY OF THE JOINTS
(SHORT MUSCLES)
- POORLY DEVELOPED COORDINATION SYSTEM
- POOR POWER OF RESISTANCE ("SOFT")

COMPANY (120 SOLDIERS)

C	1	2	3
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12 MIN. TEST

(AFTER APP. 2 WEEKS BASIC TRAINING)



A	B	C	D	E	F	G	H	I	K
>3200	3000	2800	2600	2500	2400	2300	2200	2100	<2000
	2800	2600	2500	2400	2300	2200	2100	2000	

IN ALL LESSONS OF ENDURANCE TRAINING THE COMPANY WILL BE IN THE GROUPS.
AFTER 2 MONTHS TRAINING NEW 12 MIN. TEST AND NEW GROUPS DEPENDING ON RESULTS.

TRAINING METHOD	INTERVAL TRAINING						LONG TERM TRAINING			LACTIC TRAINING	
	4 + 2	70/60	70/20	15+15	20+10	30+20	15 min.	20 min.	30 min.	25 sek. 60 sek.	35 sek. 90 sek.
12 min. preve	m	m	m	m	m	m	m	m	m	m	m
1800	595	225	215	54	72	90	2070	2700	4050		
1900	625	240	225	57	76	95	2185	2850	4275		
2000	660	250	240	60	80	100	2300	3000	4500		
2100	695	265	250	63	84	105	2415	3150	4725		
2200	725	275	260	66	88	110	2530	3300	4950		
2300	760	290	275	69	92	115	2645	3450	5175		
2400	790	300	285	72	96	120	2760	3600	5400		
2500	825	315	300	75	100	125	2875	3750	5625	135	190
2600	860	325	310	78	104	130	2990	3900	5850	140	197
2700	895	340	320	81	108	135	3105	4050	6075	145	205
2800	930	350	335	84	112	140	3220	4200	6300	150	212
2900	965	360	340	86	115	145	3335	4350	6525	154	218
3000	1000	365	350	88	118	150	3450	4500	6750	157	223
3100	1035	370	360	90	120	155	3565	4650	6975	160	228
3200	1070	380	370	92	123	160	3680	4800	7200	163	232
3300	1100	395	380	94	126	165	3795	4950	7425	167	237

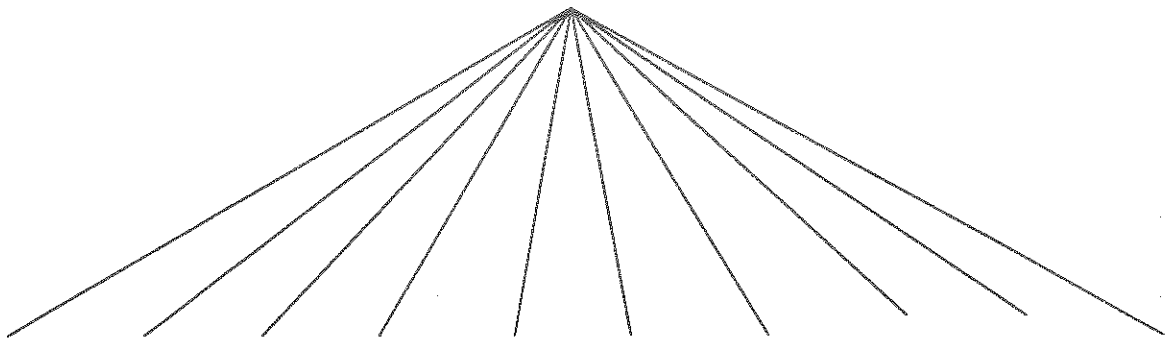
SHOULD NOT BE USED

COMPANY (120 SOLDIERS)

C	1	2	3
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MUSCULAR TEST (TEST NR. 2)

(AFTER APP. 2 WEEKS BASIC TRAINING)



A	B	C	D	E	F	G	H	I	K
>3,8	3,6	3,4	3,2	3,0	2,8	2,6	2,4	2,2	< 2,0
3,6	3,4	3,2	3,0	2,8	2,6	2,4	2,2	2,0	

IN ALL LESSONS OF MUSCULAR TRAINING THE COMPANY WILL BE IN THE GROUPS.

AFTER 2 MONTHS TRAINING NEW MUSCULAR TEST AND NEW GROUPS DEPENDING ON RESULTS.

MUSCLE TRAINING

% OF MAX. CAPABILITY	NUMBER OF REPETITIONS POSSIBLE	EFFECT
100	1	BRUTE STRENGTH
95	2-3	
90	4-5	
85	6-7	"EKSPLOSIVE"
80	8-9	STRENGTH
75	10-11	
70	12	
65	13-15	LOCAL
60	16-18	MUSCLE
55	19-24	ENDURANCE
50	25 -->	TRAINING