

INTERNATIONAL DEFENSE REVIEW

Israel considers the results of the six day war

During the five months which have passed since the end of the "six-day war" from June 5 to June 10, 1967, military leaders have had much to consider and discuss. One of the shortest, most decisive and (for the loser) most disastrous campaigns on record was a war which stretched men and logistics to the limit. Command, support, training and the methods of using modern armament are all matters which will be discussed for a long time to come.

In order to get an idea at first hand of some of the results of the war and some of the lessons to be learnt from it, an *Interavia* observer took the opportunity of visiting Israel and, in particular, the Sinai theatre of the war. So far, no similar opportunity has occurred for visiting an Arab country and, although we would have preferred to present a balanced picture, this is not at present possible. Nevertheless, it is felt that much has been learnt already towards achieving this.

As far as the relative strengths of the opposing forces are concerned, by far the greater lay with the Arab nations. The quality of the equipment involved (particularly the Egyptian equipment) was of the most modern type and some of it was the most modern in the world—better even than some possessed by NATO armies.

Published figures give little more than a guide to assessing the outcome, for it must be appreciated that the vast majority of the best trained troops, including tank crews, artillery teams and other specialists were lost to Egypt in the Sinai Desert. It is estimated that it will take not less than two years to train replacements. Although substantial numbers of tanks, guns and other weapons (including ground to ground missiles) have since been delivered to Egypt, Syria and Algeria by the Eastern bloc since the end of the fighting, it will be a long time before they can effectively be put to use.

In order to understand the significance and magnitude of the Israeli victory, it is necessary to bear in mind the outlook of the ordinary citizen and the driving force behind him. First, one must recognise the subtle

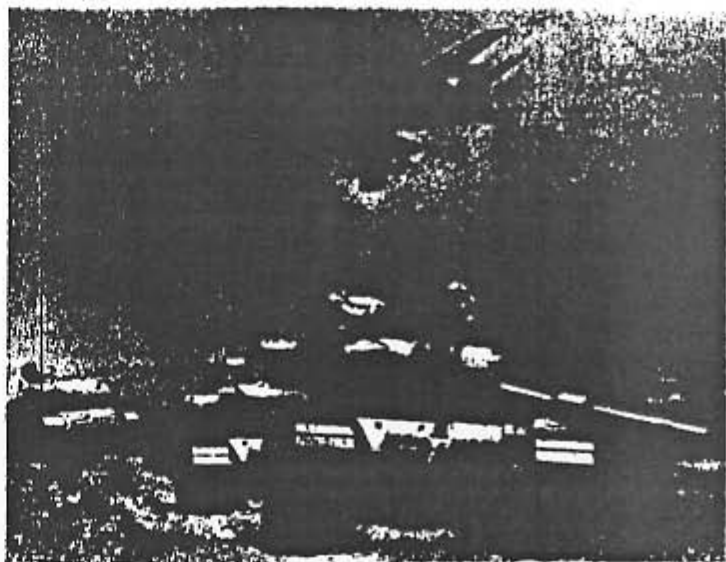
change which occurs to most of those who become Israeli citizens. They become settled, and yet feel that they are sitting on something like a volcano, surrounded by hostile States which, since the State of Israel was formally brought into existence in 1948, have refused to recognise its existence and have declared their intention of throwing the Israelis into the sea.

So the Israeli must be prepared to fight for his existence. For this reason, every man of the Jewish population who is of military age is a soldier. He lives his life as a civilian, but he is also a reservist. General Yaffe, who commanded one of the Israeli armoured divisions, has pointed out that every man in his division, himself included, had been a civilian until three weeks before the war started. At that time, the armed forces comprised some 70,000 men of whom all but about 12,000 were undergoing national service—which incidentally also applies to women, who are required to serve as well. The women are treated as equals with men and serve in units surprisingly far forward and are fully trained in the use of small arms. National Service is 26 months for men and

20 months for women. Upon national mobilisation, Israel was able to increase its armed forces to not far short of 300,000, out of a total population of 2¾ million. Mobilisation is well-advanced within 24 hours and complete in 72. Each officer and NCO has the duty to maintain contact with his men and to notify them when they are required. In emergency, a radio code can be used to call up reserve units.

Israel has gained not only territory and more secure frontiers with Egypt, Syria and Jordan. She has also gained a breathing space which will enable her to assess the situation in an atmosphere of comparative calm. There is one extremely valuable lesson which the Israelis have learnt—never to underestimate their opponents. "Last time we were better than the enemy. Next time, they will improve and we must be better still"—this is a theme repeated frequently. Significantly, no-one seems to doubt that there will be a "next time" unless a diplomatic miracle is achieved and there seems to be little faith in the ability of the United Nations effectively to protect the State of Israel which it voted into existence in 1948. The Arabs'

Symbolic of the integration between Israel's army and air force, a single-seat Sud-Aviation SO-4050 *Vautour II A* all-purpose fighter-bomber is seen over a company of *Centurion* tanks. The *Vautour II A* has an armament of four DEFA 30 mm cannon and can carry internally up to 4,500 lb of bombs. Four external racks will carry bombs, fuel tanks or rocket packs. The *Centurion* weighs about 50 tons, carries a 105 mm gun and has an engine of 635 h. p.



objections to the handing over of areas of Palestine to the Jews are too well-known to need repetition here, but these are fundamental to their refusal to recognise Israel's existence as a State.

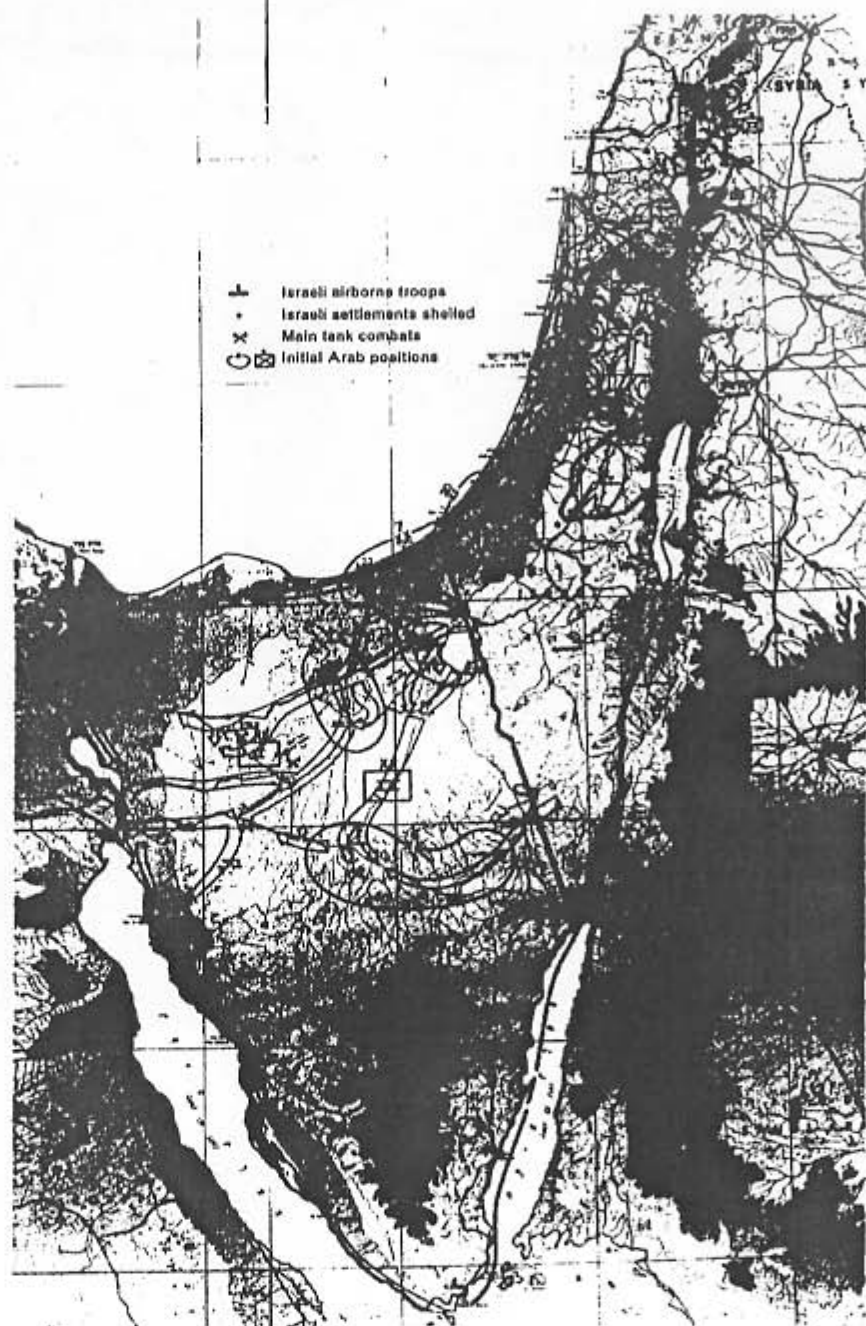
Following upon the Russian warning to Cairo early in May 1967 of large Israeli troop concentrations on the Syrian border, the Egyptians ordered the UN observers to withdraw and moved considerable forces up to the Sinai border and blockaded the straits of Tiran. This Russian report was completely untrue, according to the UN observers on the Israel—Syrian border. According to recent press reports, the Russians then realised that Egypt was intent on making an attack on Israel in support of Syria and, some 30 hours before the start of the war, persuaded the Egyptians to change their minds and resort to diplomatic pressure. By now, however, it was too late—Israel was committed to a once-and-for-all campaign to drive away the constant threat of her neighbours. By various deceptions she persuaded the Arabs that she was not ready to make an immediate strike in Sinai by sending some of the army on a false "leave", and by feints to the south which caused Egypt to send aircraft and ships away from the Suez Canal area. Nevertheless, an Egyptian army of more than 80,000 troops in seven divisions, and not less than 800 tanks faced Israel in Sinai, and the Israeli decision to strike on this front, taken on June 4, was based on one prime factor—the achieving of immediate air superiority. Their land forces were outnumbered by nearly two to one.

The Israelis knew that it would only be a matter of hours before a reaction could be expected from Syria, Jordan and perhaps Lebanon. Their immediate need therefore appeared to be to strike the Egyptians very hard, roll them back and then turn their attentions to the north and east, so as not to be committed to fighting on three fronts at once. The result is well-enough known not to need repetition.

The Israelis felt that their country was too small to fight in, so they had to break out and fight in the open desert where there was room to manoeuvre, as quickly as possible. Knowing that the Egyptian fortifications in Sinai extended in considerable depth (some of them were built in 1956 and others as far back as 1948), it was necessary that all the Israeli forces should be mobile and protected by armour—above all, swift moving.

In order to achieve superiority on the ground with relatively inferior equipment in terms of numbers and of being up to date, the Israelis required air superiority. This they achieved in the remarkably short time of 2 hours, 50 minutes by knocking out the Egyptian Air Force and ground radar in Sinai and Egypt, and then turning their attention to the Air Forces and radar of Iraq, Jordan and Syria. By the end of the second day a confirmed and checked grand total of 416 Arab aircraft had been destroyed, 393 of them on the ground. No claim for the destruction of an aircraft was entertained until it had been double-checked. Having ensured the virtual elimination of enemy interference (there were, however, a few isolated instances), the Israeli Air Force proceeded to attack the Egyptian army in Sinai, and then the Syrian and Jordanian armies, once the Sinai campaign was underway. Each air force squadron acted in accordance with the immediate requirements of

The Israeli advance, June 5-10, 1967



the army command to which it was assigned. By the end of the sixth day, the Arab armies and air forces had virtually ceased to exist and the campaign had proved a convincing example of the use of an integrated air and ground tactical force.

The arena of the action can be described as follows: The Sinai Peninsula has three principal axes. One is the coastal axis, from Rafiah to the Canal; the second is Ketziot—Abu Agueila; the third one is Quntiyileh—A'Temed—E'Nakhl—Port Fuad—Suez. Other than that, the approach to Sharm-el-Sheikh is principally by air or, by sea, along the western coast of the Peninsula.

There were three aims in the campaign: to destroy the Egyptian army once and for

all; to capture Sharm-el-Sheikh and thus to open the road to Eilat; and the third aim, which was the result of the second, to conquer all of Sinai, in order to reach Sharm-el-Sheikh. The campaign was carried out in three stages: the aim of the first stage was to open the principal passages into the Peninsula and thus destroy the forces on the eastern line; the second was to push forward, hit and destroy the second defence line; and third stage was to engage the armoured force in battle and destroy it. The enemy had seven divisions. Two were armoured divisions; one was a division of Palestinians in the Gaza Strip (the 20th Division); the 7th Division was situated between Rafiah and El Arish; the 2nd Division was



The entrance to the Mitla pass, an almost inextricable tangle of burnt out tanks, personnel transport, fuel and other supply vehicles. Visible are two T 34 tanks and a SU 100 tank destroyer and, at left, a supply truck which is lying on top of another vehicle.

positioned along the Abu Ageila-Qusema line; the 3rd Division along the Djebel Libni Bir Hasna line; the 4th Armoured Division was stationed between Nakhl and Quntyleh; and a special armoured force of division size was in the Qreya Pass facing Mitzpe Ramon.

The first stage of the attack was along two axes. One line of attack was via Khan Yunis and Rafiah in the direction of El Arish and the second along the Ketzot-Abu Ageila line. The two forces were each of divisional strength, and in addition a third force of divisional strength broke through over dirt roads to the centre of the Djebel Libni-Bir Lahfan triangle. In addition to these forces, there were two augmented brigades.

During the second stage, the Israelis aimed to demolish the second defence line from Djebel Libni to Bir Hasna, and to induce the enemy's armoured divisions to



A burnt out T 55 tank equipped with infra-red projectors.

stage a counter-attack, and thus effect contact with them. The Egyptian divisions did not counter-attack. At this stage, the central force started to advance in the direction of the Djebel Libni-Bir Hasna line, while the division in the north broke through the Bir Lahfan position and proceeded at great speed towards the Suez Canal.

The third stage was one of tank battles, with the Israelis attempting to surround the Egyptians and compel them to fight. During this stage the Israelis reached Bir Gifgafa and blocked the enemy's retreat route to the Canal, while one division took Farq'r near the Mitla Pass, thus bottling up the

southern exits. An armoured brigade took Nakhl, cutting off the Egyptian forces to the east.

It was at this stage that the Egyptian army was compelled to carry on a running battle in two directions—one in order to escape encirclement and reach the Canal, and the second in order to block the passes leading to the Canal along the three axes: Ismailia, Jirdi and Mitla. This battle raged for a whole day and well into the following night, with about one thousand tanks taking part altogether. It ended at 10 p. m. on June 8 and by 3 a. m. on the fifth day of the war, all the Israeli forces had reached the Canal. That same day, Israeli troops were landed by helicopter and naval ships at Sharm-el-Sheikh, while a land unit reached Ras Sudar on the Red Sea by way of the Mitla Pass.

The outcome of these operations was that the Egyptians lost between five hundred and six hundred tanks destroyed and another two hundred were captured intact. Four Egyptian divisions were totally destroyed and a further three were eliminated as fighting formations, even though isolated units escaped. Among the booty taken were a number of SA2 *Guideline* ground-air missiles which were found at a missile-launching base between the Mitla Pass and the Suez Canal. This base was taken intact, with the missiles ready for launching.

In the course of ninety-one hours, an Israeli force of just over three divisions defeated an army of seven divisions and destroyed it. This was due to a number of factors. The first factor consists of concentration of forces, speed of movement and a constantly maintained impetus, while fighting continuously and without rest for four days and four nights. The second factor

A Russian vehicle believed to be used for loading gas into shells and missiles. This is one of a number of such vehicles which were captured.



The wreck of an ATS heavy tractor and the M-37 152 mm howitzer which it was towing when blown up in the Mitla Pass.

concerns the tactics of unusual penetration in depth to determine at once the enemy's fighting capacity. The organization for the supply of fuel, ammunition and repairs enabled the Israeli divisions to act independently, at least during the first seventy-two hours, and they needed reinforcement only on the last day.

The Israelis used a number of old tanks, including some from the Second World War. The Egyptians and Syrians had the most modern vehicles but the Israelis improved their old tanks by improvisation, endeavouring to get a better driving gear and better guns. Nevertheless, they could not improve their tanks so as to compete with the most modern Soviet vehicles. They believe that only the American army can compare with the Egyptian army as regards quality and quantity of armoured equipment.

Another difficulty is that the Israeli army is principally composed of National Service-



This SU 100 tank destroyer was found at the entrance to the Mitla Pass with the barrel of its 100 mm gun split in half.

men and Reservists. The operation of a modern tank is somewhat complex and, in the Egyptian army, all the armoured personnel are regulars. By comparison, the Israeli tank personnel get only very short periods of national service to learn their trade and to reach the necessarily high standard of training required. Their success is all the more remarkable for that.

An Egyptian officer is said to have complained: "Those Jews don't attack according to the book". That is probably the reason for the Israelis' success. They did not attack in the way it is written in military manuals. Their speed, momentum, inventiveness and

the example of their officers showed which factors are the most important.

It was with this background knowledge that *Interavia* visited the scene of the Sinai campaign. It is regretted that time did not permit an examination of the fortifications on the Syrian border in the north or of the area called the West Bank—two quite different sorts of action involving both a mountain assault and the clearing of the Old City of Jerusalem.

In addition to visiting the scene of some of the actions in Sinai (Khan Yunis, El Arish, Djebel Libni, Bir Gifgafa, Bir Thamaa and the Mitla Pass), *Interavia* had the chance of visiting an air force base. The army and air force are closely related tactical organisations and their activities must be considered jointly.

An examination of some of the battle areas has made clear some of the difficulties which had to be overcome by army commanders operating in an area like the Sinai Desert. Apart from well-defined ranges of hills, the northern area is relatively flat with rolling dunes and shallow wadis. Water is non-existent over most of it. It is ideal manoeuvring ground for tanks provided one has air superiority and good communications. As well as fuel and ammunition, water is a vital necessity. One only had to see the long lines of abandoned Arab vehicles, bonnets open and drained of water for drinking purposes, to realise the plight of troops unfortunate enough to be bereft of their transport and also of their water supplies. Air superiority of the Israelis ensured that their strikes against supply "caravans" as they are called caused innumerable fires among vehicles carrying supplies. Time and again, the roads were obliterated by massive explosions and vehicles scattered left and right to avoid a merciless air assault by Israeli fighter-bombers.

The Israelis showed themselves to be masters of the unexpected. In more than one instance, Arab forces were in apparently impregnable positions—mines, tanks, anti-tank guns and heavy artillery fanned out so as to block the only route between soft sand dunes or other "impassable" topographical features. Secretly, the Israelis had practised techniques for penetrating soft sand with armoured columns and, when it came to a showdown, they managed to attack from the flank, to turn it and eventually surround the position.

If the Arabs showed a weakness in their tactics it was a slowness of mobility to adjust themselves to an attack from an unexpected quarter. Their training was lacking in inventiveness although it must be said that they fought hard and in many cases with considerable determination. Once their leadership was broken however, the action became a flight to safety rather than to a rallying point for a rearguard action. This

in turn became a rout and the headlong flight to the Mitla Pass towards Suez and to Ismailia along the road to the north which ensued, resulted in one of the most decisive massacres ever recorded.

Israeli tanks and aircraft blocked the western end of the Mitla Pass and then proceeded to drive the retreating enemy convoys into the trap where they were systematically destroyed. Twenty-five kilometers of road are almost completely blocked by wrecked vehicles and it will be a long time before this road is clear. On the road from Djebel Ibbi, through Bir Gifgafa to Ismailia,

the story is the same. It is a terrible picture of the failure of an army boasting over 800 tanks, thousands of guns and the most modern equipment in the world, but lacking air defence, being utterly destroyed in only three days because of the most ruthless and determined attacks by Israeli artillery, tanks and aircraft controlled by men whose country's very existence depended on success—and a swift success at that.

The Israelis pressed home their attacks in the face of strong resistance from the most modern weapons and their losses were, at times, heavy in proportion to the size of

Captured Soviet Military Equipment ¹⁾

I - Battle Tanks

JS III Battle Tank
 Gun 122 mm, effective range 2,000 m
 Weight 45.8 tons
 Armour, Front 200 mm
 Rear 120 mm
 Operating range 190 km ▶



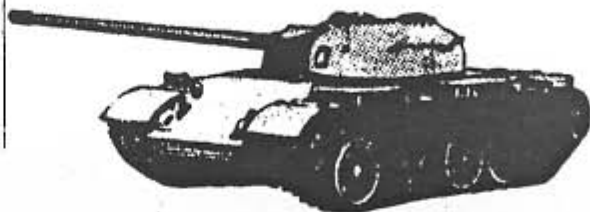
SU 100 Tank Destroyer
 Gun 100 mm, effective range 2,000 m
 Weight 30 tons
 Armour 78 mm
 Operating range 300 km ▶



T 55 Battle Tank
 Gun 100 mm, effective range 2,000 m
 Weight 36 tons
 Armour, Front 105 mm
 Rear 100 mm
 Operating range 500 km ▶



T 54 Battle Tank
 Gun 100 mm, effective range 1,500 m
 Weight 36 tons
 Armour, Front 105 mm
 Rear 75 mm
 Operating range 350 km ▶



T 34 Battle Tank
 Gun 85 mm, effective range 1,000 m
 Weight 32 tons
 Armour, Front 78 mm
 Rear 60 mm
 Operating range 300 km ▶



PT 76 Amphibious Reconnaissance Tank
 Gun 76 mm, effective range 1,500 m
 Weight 14.6 tons
 Armour, Front 40 mm
 Rear 20 mm
 Operating range 350 km ▶

¹⁾ All data based on Israel Defense Ministry figures. Armour figures appear to indicate maximum plate thickness.



II - Armoured Personnel Carriers



← BTR 152 Armoured Personnel Carrier
 Gun 1 x 7.62, 12.7 or 14.5 mm MG
 Weight 8.5 tons
 Armour 13.5 mm
 Operating range 800 km



← BTR 60 Recce Armoured Personnel Carrier
 Gun 1 x 7.62 mm MG
 Weight 6 tons
 Armour 15 mm
 Operating range 200 km



← Gun 1 x 12.7 mm or 14.5 mm MG
 Weight 14.5 tons
 Armour 20 mm
 Operating range 350 km

An amphibious vehicle in the Sinai desert. This BTR 50 (P) armoured personnel carrier seen at the Mitla Pass was still painted green, evidence of the haste with which it was brought into action. Visible at the rear are the closed ports for the water jet propulsion. This vehicle was evolved from the PT76 reconnaissance tank.

their forces. The Israelis knew that the enemy possessed poison gas, understood to be both respiratory and irritant and that this had been used in the Yemen. There was ample evidence of equipment for using gas amongst the wreckage of Egyptian army equipment. The question which has arisen amongst observers is—under what tactical circumstances did the Arabs propose to use it? This is a double edged weapon and, when used against a modern army or against a well-disciplined civilian population, this type of gas would seem to be of little use.

A temporary park for salvaged and undamaged Soviet artillery, "somewhere in Sinai". At left, M-38 howitzers (122 mm); at right, M-44 anti-tank/field guns (100 mm).



Everything depended on a swift knock-out blow and this the Israelis achieved with great effect.

What lessons have been learnt as a result of this massive retaliation? Air superiority, as always, is the deciding factor in open ground where there is no cover, and it gave the Israelis not only a secure base, but enabled them to concentrate their efforts on destroying the enemy's armour. Furthermore, it is clear that a well-trained and well led mobile force has every chance of succeeding against a dug-in defence having superior firepower

Comparative Strength

Compiled from figures published by the Institute of Strategic Studies London

EGYPT (U.A.R.)	1966/7	1967/8
Population	30 million	see note below
Military Service (men)	3 years	31 million
Total armed forces including reservists	190,000	180,000
Defence Budget (\$)	494 million	655 million
Army strength including reservists	160,000	140,000
Armoured units	3 divisions	2 brigades
Infantry units	4 divisions	3 divisions
Parachute units	1 brigade	1 brigade
Artillery units	12 reg't	5 reg't
Commando units	15 battalions	10 battalions
Tanks and heavy guns		
T 54/55	450+	250
T 34	350	70
JS III	60	20
SU 100, JSU 152, ZSU 157 SPG	150	150
Centurion Mk.3	30	?
AMX 13		
Guns and rocket launchers of 122 mm and over	?	500

Note: The figures for 1967/68 include deliveries provided by the Soviet bloc after the six-day war.

ISRAEL	1966/7	1967/8
Population	2.85 million	3 million
Military service (Jewish population only) men/women	26/20 months	30/20 months
Total armed forces	275,000	275,000
Regular armed forces	71,000	71,000
Defence Budget (\$)	447 million	463 million
Army strength — regular/reserve		
Armoured units reg/res	1 div/1 div	1 div/1 div
Infantry units reg/res	3 brig/16 brig	3 brig/14 brig
Parachute units reg/res	1 brig	1 brig
(Note: artillery units are not quoted separately)		
Armour:		
M 48 Patton	200	225
Centurion Mk.5 & 7	250	250
Super Sherman M4	200	175
T 54/55	—	200
AMX 13	150	140
SP guns (105 & 155 mm how.)	250	250

if this cannot adequately defend its own flank. Another lesson—perhaps one of the most important—is accuracy of shooting. tanks, when confronted by dug-in tanks among undulating sand dunes were forced to resort to long range firing. Some very remarkable results were achieved and, due to the superior qualities of the Israeli tank guns, they were able to score hits on tanks while out of accurate range of the Russian guns of the Egyptians. As regards leadership, the fighting quality of men who are personally led is always better than that of men who are ordered forward, as in the case of the Egyptian army. The high proportion of Israeli officers killed in action is an unfortunate result of personal leadership, and this in addition, in many cases, occurred through their habit of leading with their tank turret hatches open.

It seems fairly certain that it will be a long time before the Egyptian army is rebuilt—perhaps two years, perhaps more. At all events, the basic Arab/Israeli problem is still unresolved and the question is whether armed conflict is worth pursuing further. In the light of past experience it is to be hoped that wiser counsels will prevail.

An enormous quantity of undamaged Soviet tanks, guns and equipment was captured by the Israelis and some examples of these are illustrated on the accompanying pages. ++