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JOINT SERVICES

RECOGNITION *Journal*

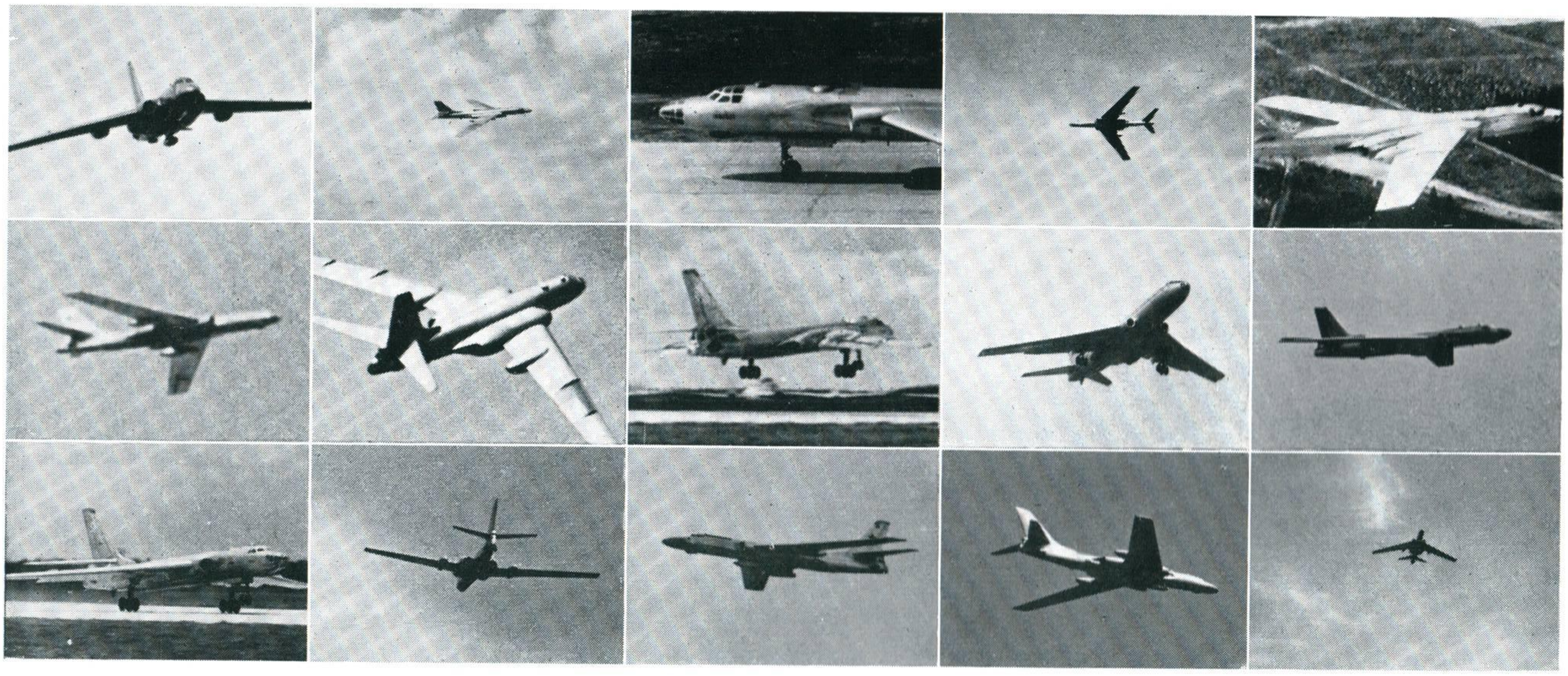


Vol. 22 DECEMBER 1967 No. 12

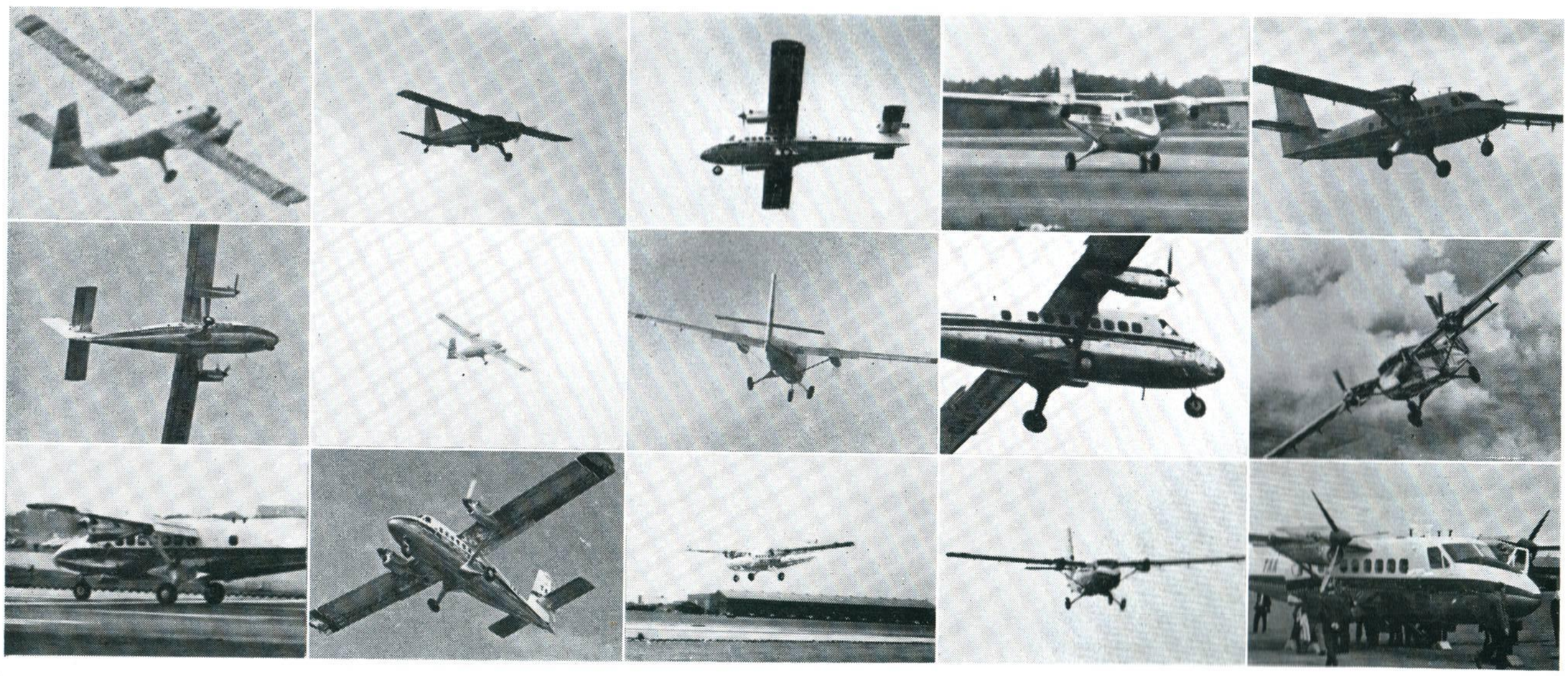
TEST PAPERS

Solutions on page 334

BADGER?



TWIN OTTER?



TRANSALL?



DECEMBER 1967 Vol. 22 No. 12

JOINT SERVICES

RECOGNITION JOURNAL

The *Joint Services Recognition Journal* is a monthly publication produced by the Directorate of Flying Training (R.A.F.), Ministry of Defence, and prepared in collaboration with the Admiralty Board, the Army Department and the Ministry of Technology. Applications for copies can only be accepted from the Services or other official bodies, and must be submitted through the normal official publications supply channels—**not** to the Editorial Office or direct to the Ministry of Defence.

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* *Identification Lessons*

One hears . . . about the "art of recognition" and how one must be dedicated to it to be successful. This is a nonsense: recognition is a skill. One hears stories of vast efforts of memory necessary to become a skilled recogniser. This too is a nonsense: all one does is to train without undue effort.

Set out below are the very simple instructions which, if carried out, enable anyone to train himself—or others—to identify any of the aircraft, ships or tanks set out in this or any other *Journal*. Don't get confused and don't let others bamboozle you with intelligence, information, or technical knowledge. Forget your slides, recognition rooms, libraries and above all forget about memorising. Sail right into one of the lessons on any object you don't know and prove to yourself that you can learn to recognise painlessly.

Lesson Instructions

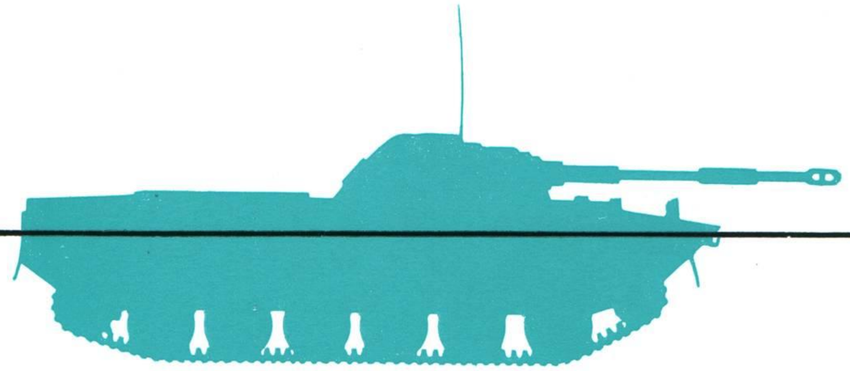
The ability to identify is a skill and therefore a matter of "doing", not of gathering information. Submit to the instructions given below in every lesson and the ability will become automatic.

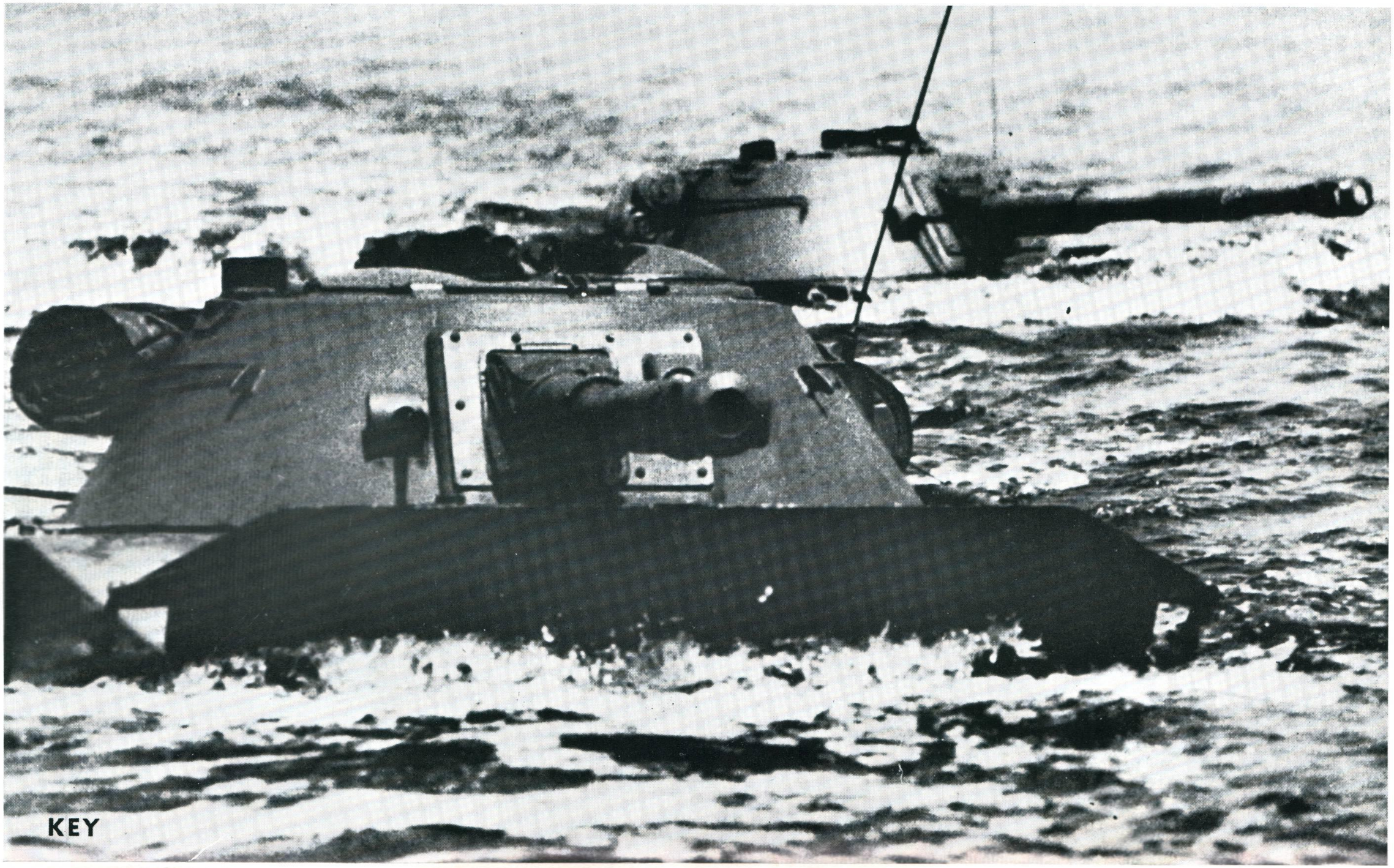
1. **Read the text associated with the lesson.**
2. **Prepare a list of target numbers so as to be able to tackle the targets in any order.**
3. **Identify the target pictures by comparing them with the key views: start with the easy ones so as to gain experience: also use targets already identified to solve the more difficult ones.**
4. **When certain of the identity of a target write down its name *IMMEDIATELY* against the appropriate number on your list. THIS IS IMPORTANT:**
5. **Lessons should not be hurried or given a time limit. So far as beginners are concerned, it is more important to identify accurately than quickly.**
6. **Do not attempt conscious memorising of details, shapes, or names. The procedure will take care of that. Do not attempt to do it without the key too soon, wait until it is self-evident.**

1. **Den zur Lehre gehörigen Text lesen.**
2. **Eine numerierte Typenliste vorbereiten, in der angesprochene Typen in eine gewisse Ordnung gebracht werden können.**
3. **Typen ansprechen durch Vergleich mit den Hauptansichten (von oben, von unten, von vorne, von hinten und von der Seite). Anfangen mit den einfachen Bildern, um Erfahrung zu bekommen. Die angesprochenen Typen zur Ansprache der schwierigeren benutzen.**
4. **Wichtig: Sobald ein bestimmtes Flugzeugbild mit Sicherheit richtig angesprochen ist, sofort die Typenbezeichnung in die entsprechende Stelle der Liste eintragen.**
5. **Bei der Übung nicht beeilen oder eine zeitliche Begrenzung festlegen. Für Anfänger ist es wichtiger, richtig anzusprechen als schnell.**
6. **Nicht mit Einzelheiten, Umrissen, Namen aufhalten.**

Soviet PT-76

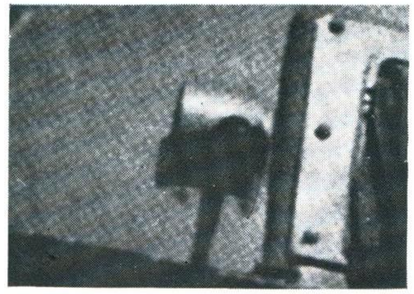
Amphibious Reconnaissance Tank



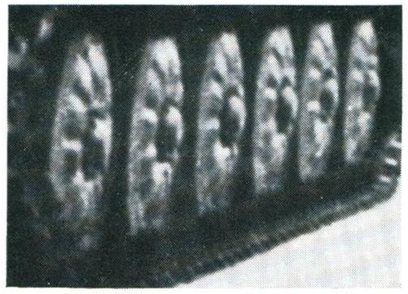


It is almost 15 years since the PT-76 amphibious reconnaissance tank began to come into service with the Soviet Army. But although it is no longer new and has been featured more than once already in the *Journal* it is still an important and widely used armoured vehicle. In fact, it is not only used on a large scale in the USSR but also many other countries, from Poland to Laos and from Finland to Egypt.

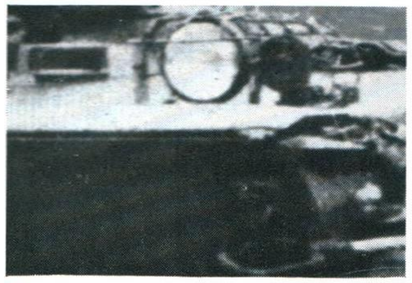
Lesson instructions are on page 311 ***Solutions on page 334***



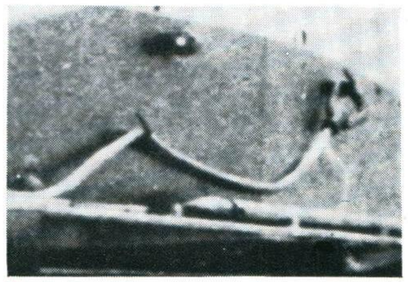
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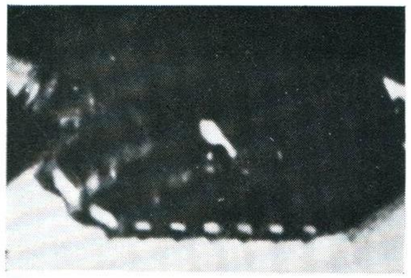


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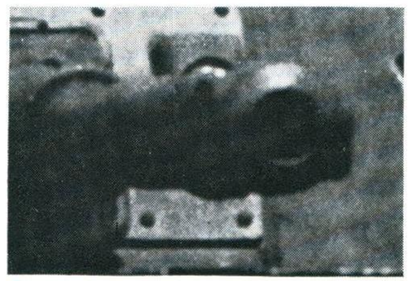


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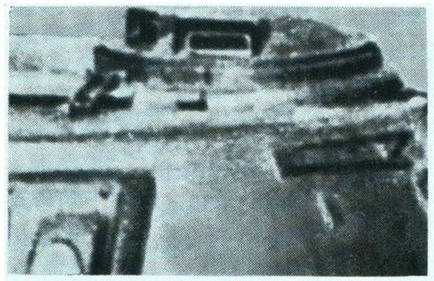




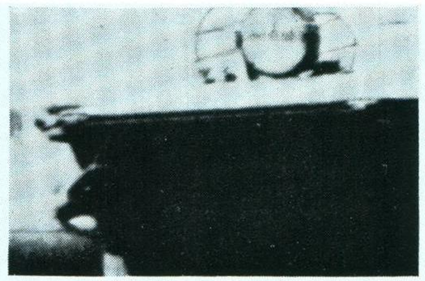
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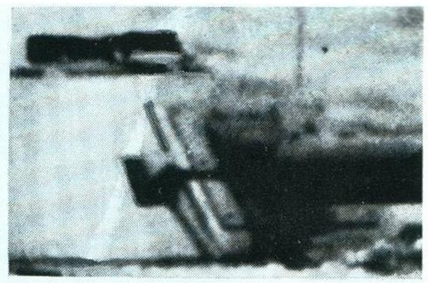
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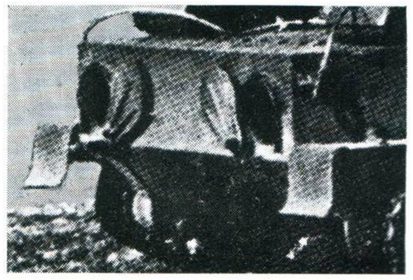
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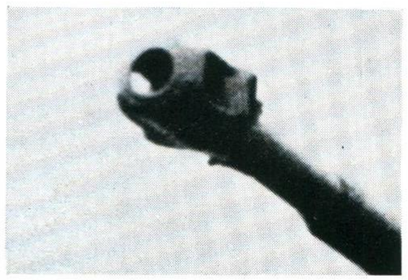
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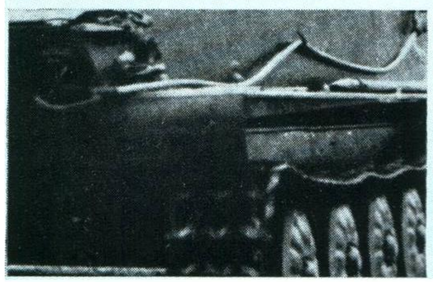
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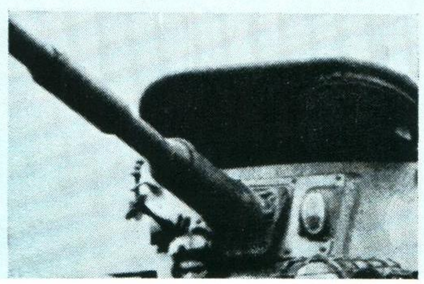
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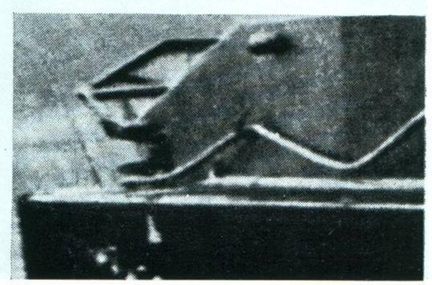
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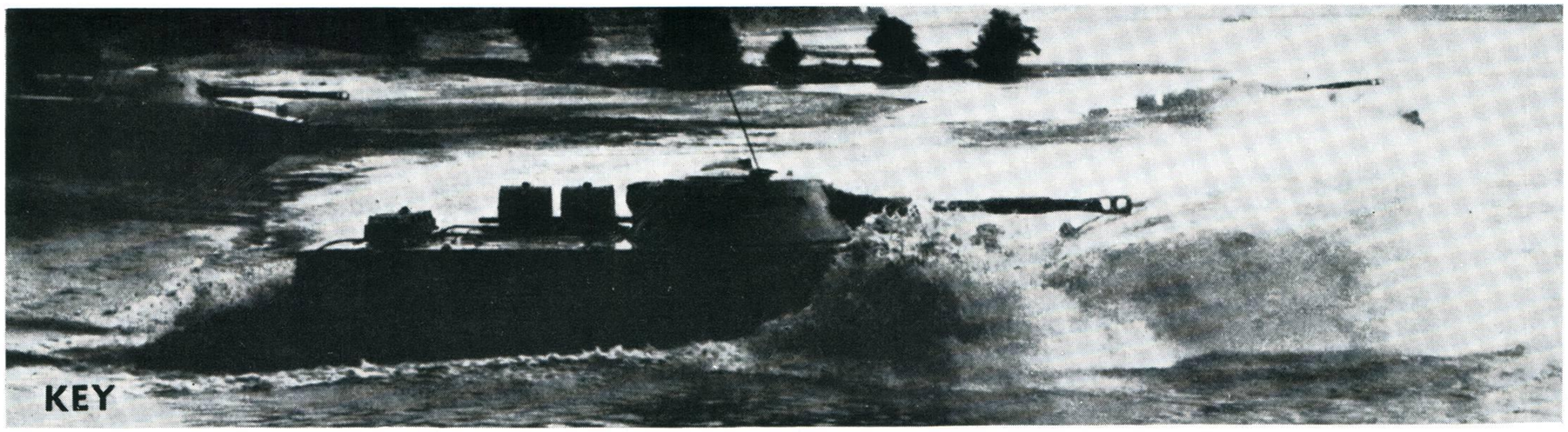
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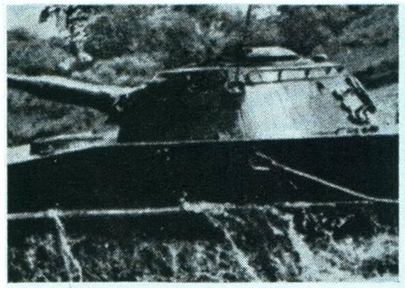
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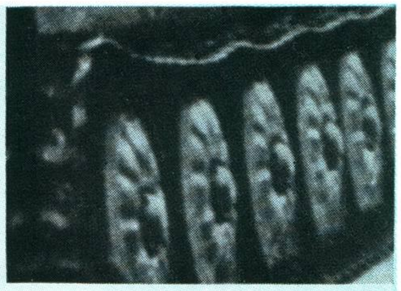
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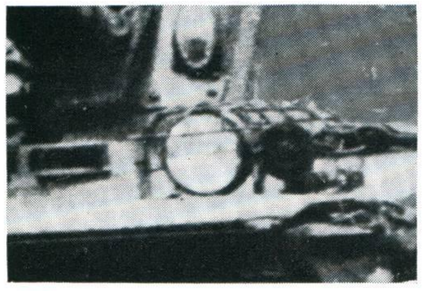
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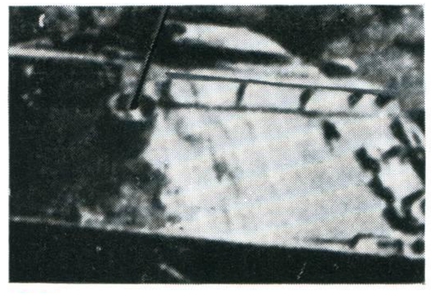


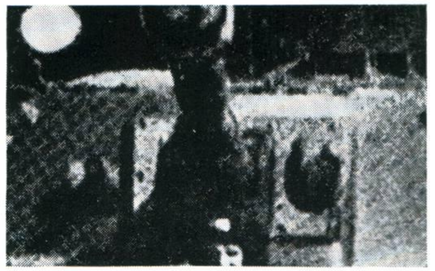
PT-76 Amphibious Reconnaissance Tank

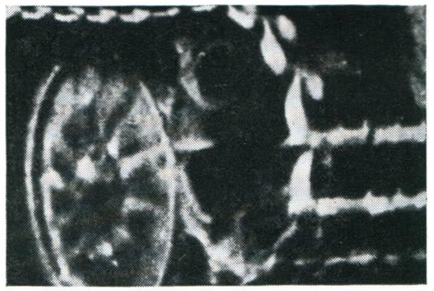

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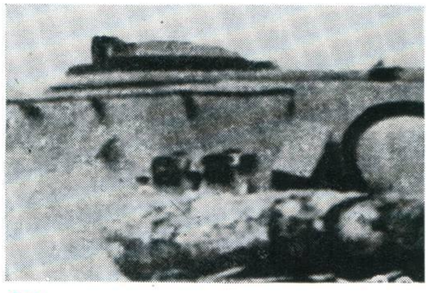

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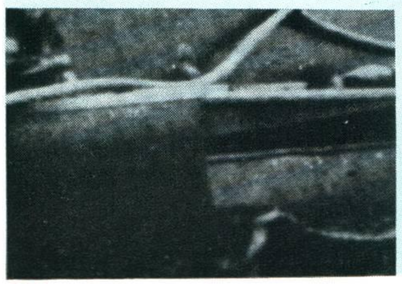

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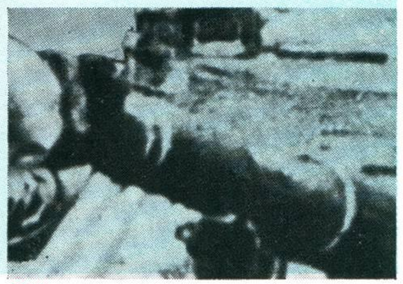

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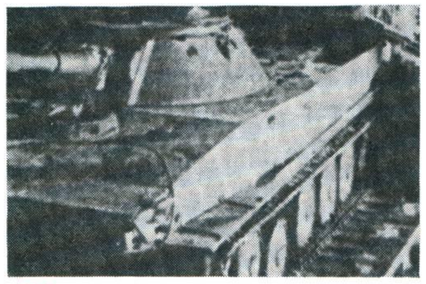

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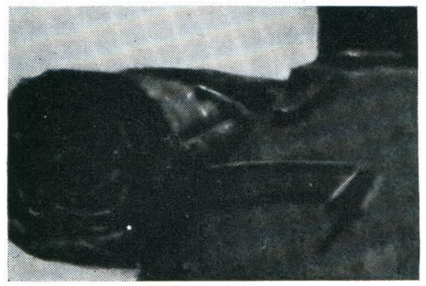

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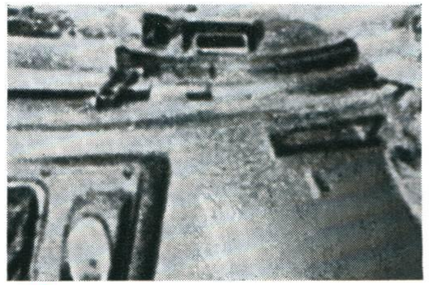

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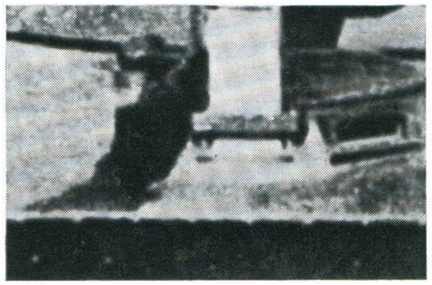

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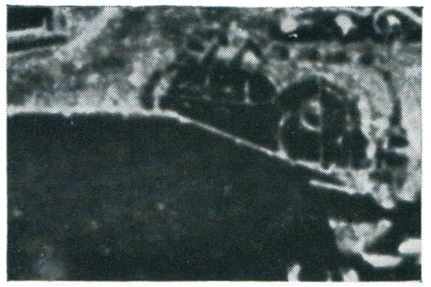
The PT-76 is large in relation to its 14-ton weight, the bulk being necessary to give it buoyancy. When in water it propels itself by means of a water jet propulsion unit, the intakes of which may be observed towards the rear of the hull side plates, above the track guard, and the outlets in the rear hull plate. The propulsion unit make the PT-76 superior in water to amphibious armoured vehicles which propel themselves in water, as well as on land, by means of their tracks and it was the first armoured vehicle to go into service with this type of water propulsion.

In other respects the PT-76 is undistinguished. Because it is large in relation to its weight, its armour is inevitably light and its main armament consists of a medium velocity 76-mm. gun. The gun is mounted in a characteristic conical turret which is occupied by two of the PT-76's three-man crew. Another characteristic feature of the PT-76 is the long, low track assembly with six medium-size road wheels per side and no return rollers.

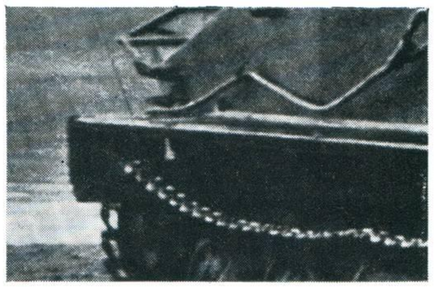
Lesson instructions are on page 311 *Solutions on page 334*



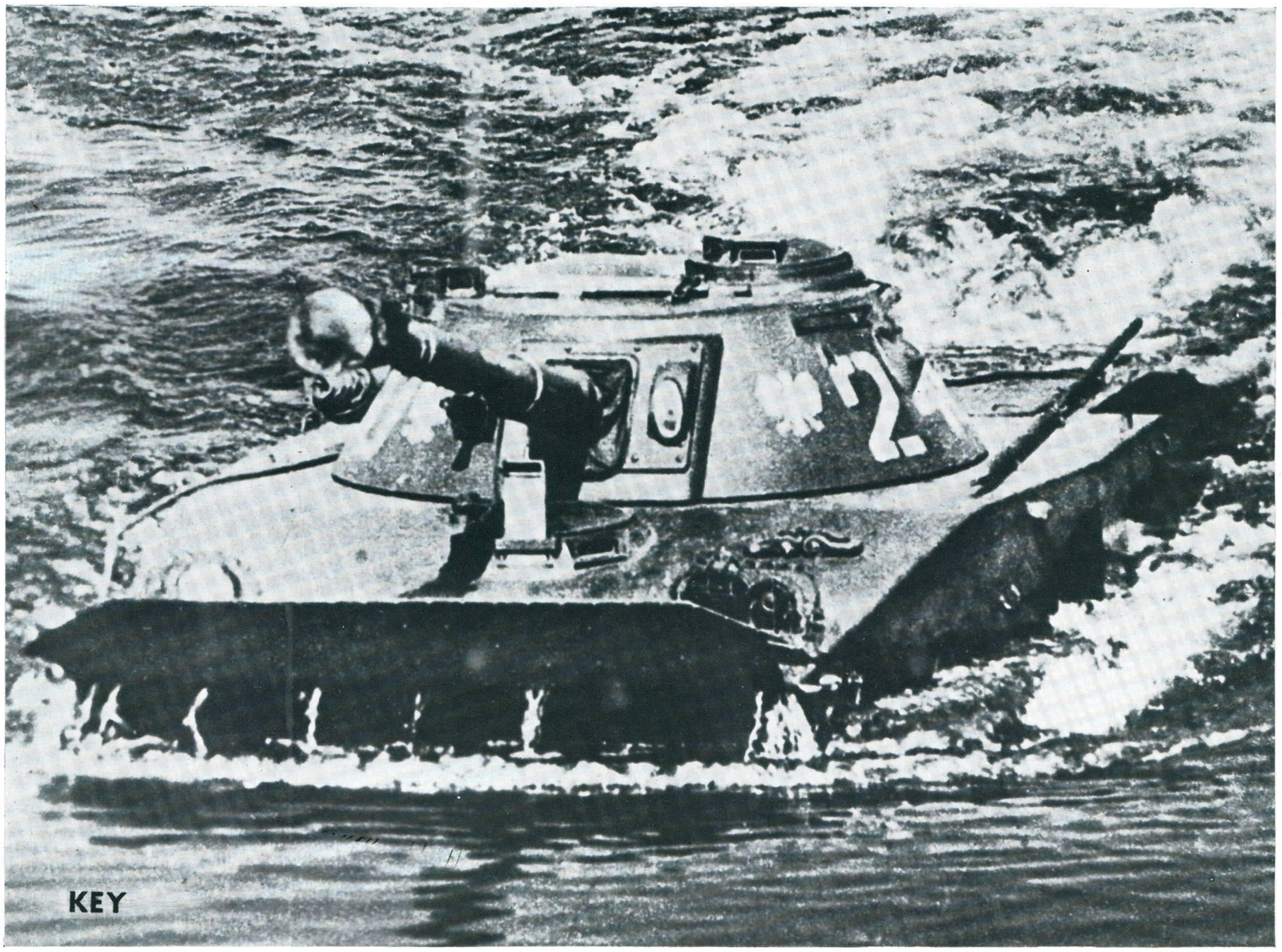
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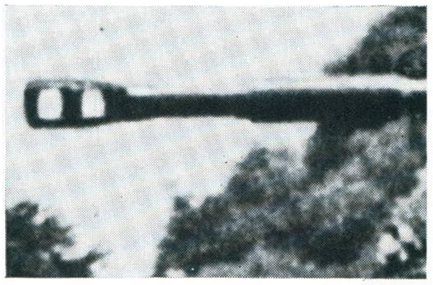


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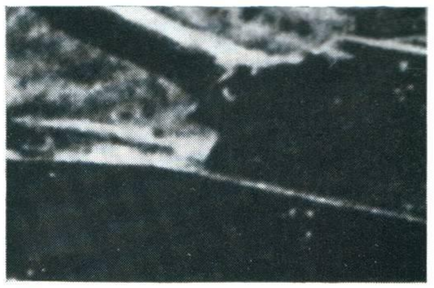




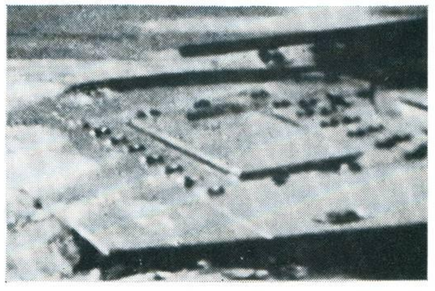
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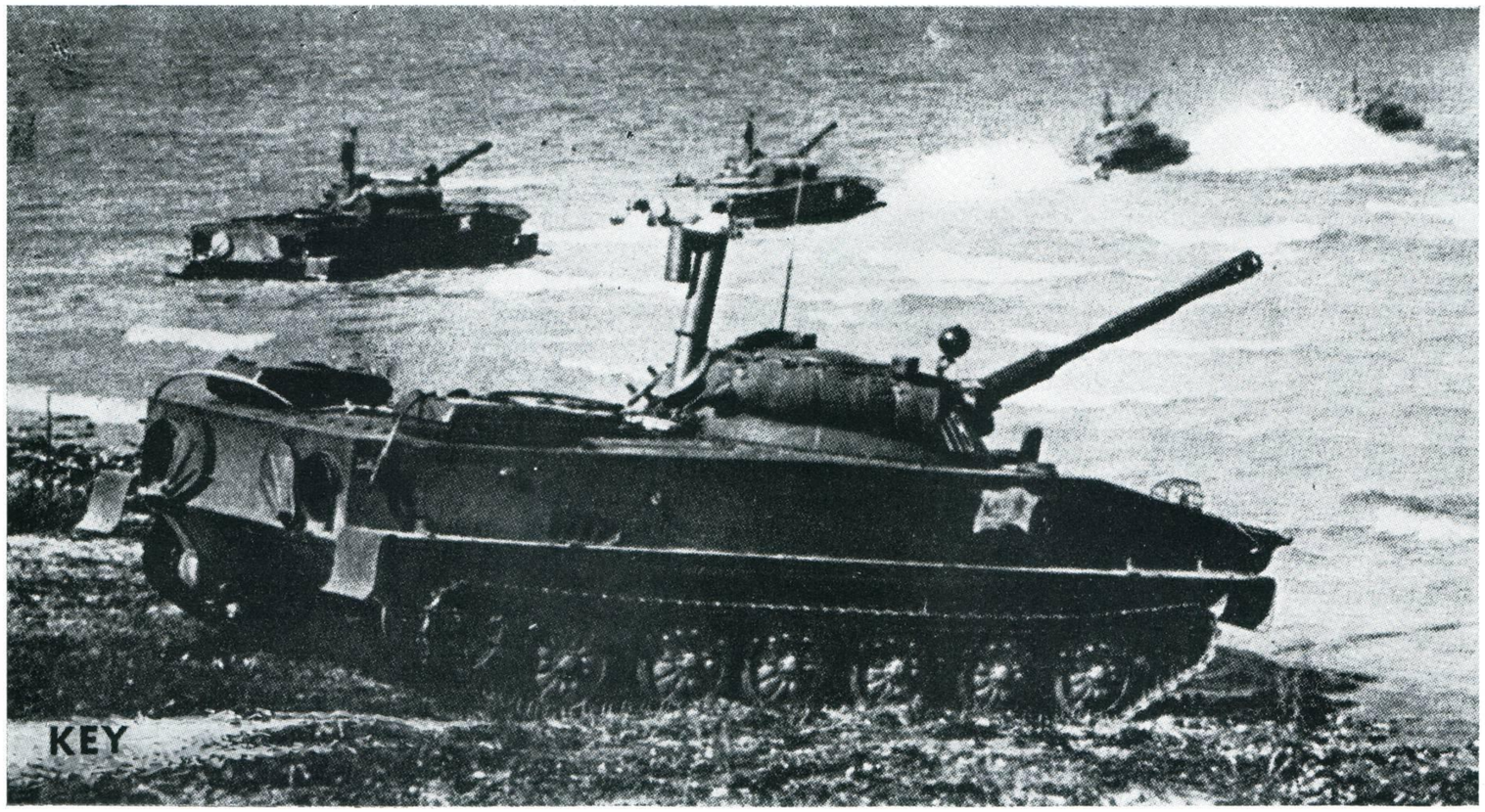
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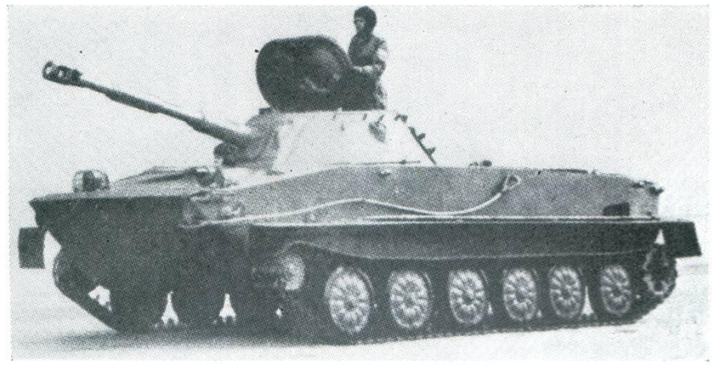


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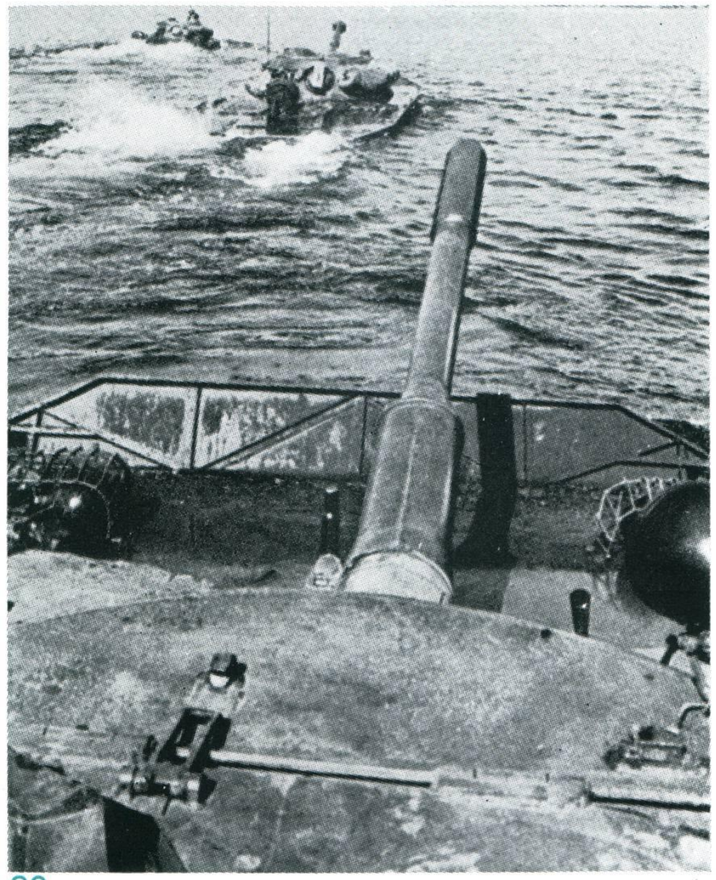
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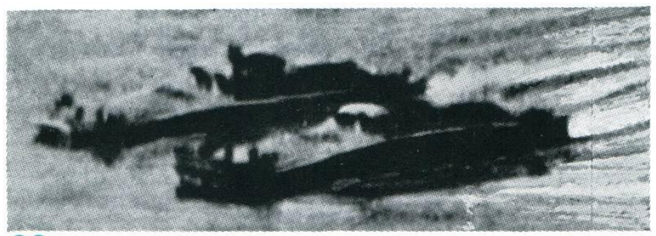


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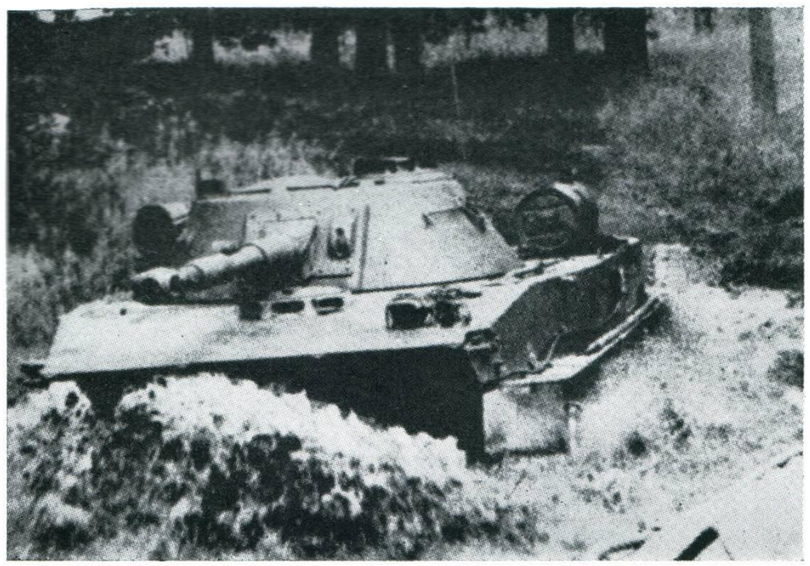


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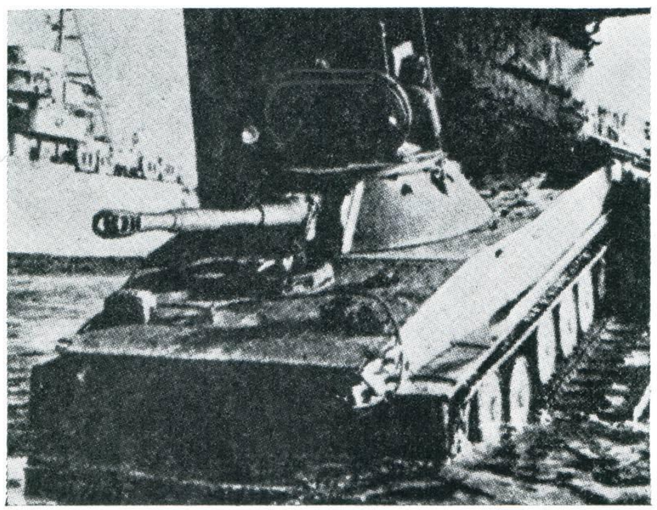
PT-76



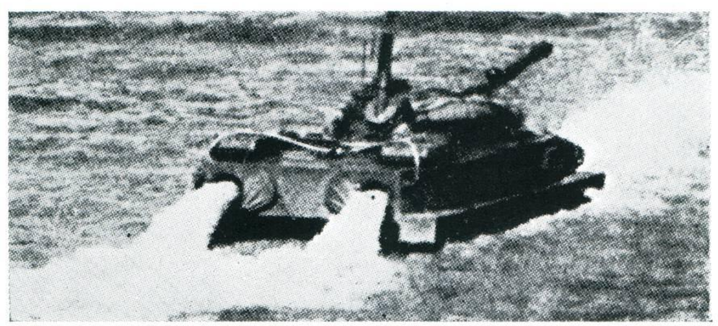
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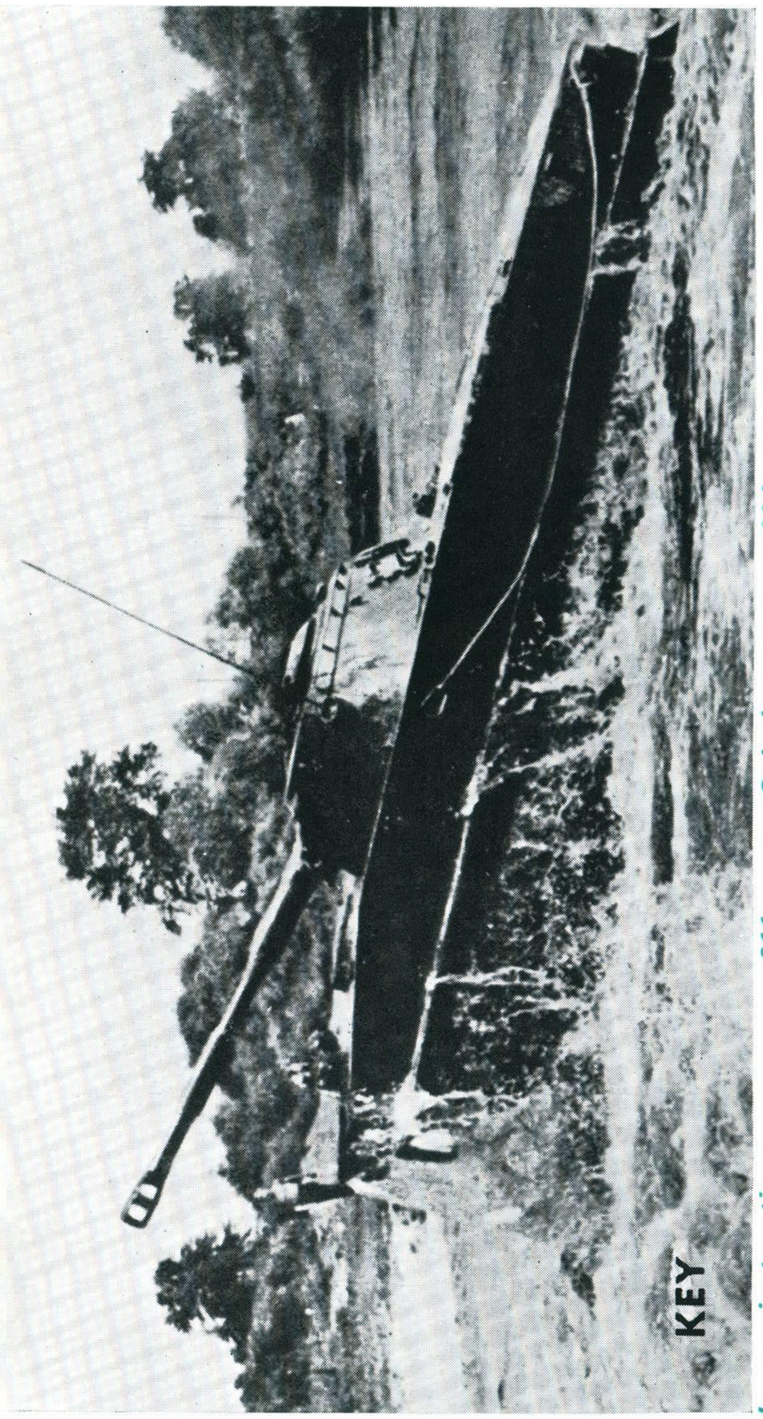
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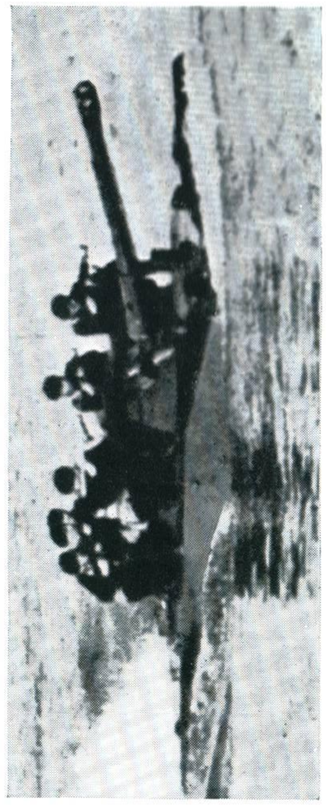


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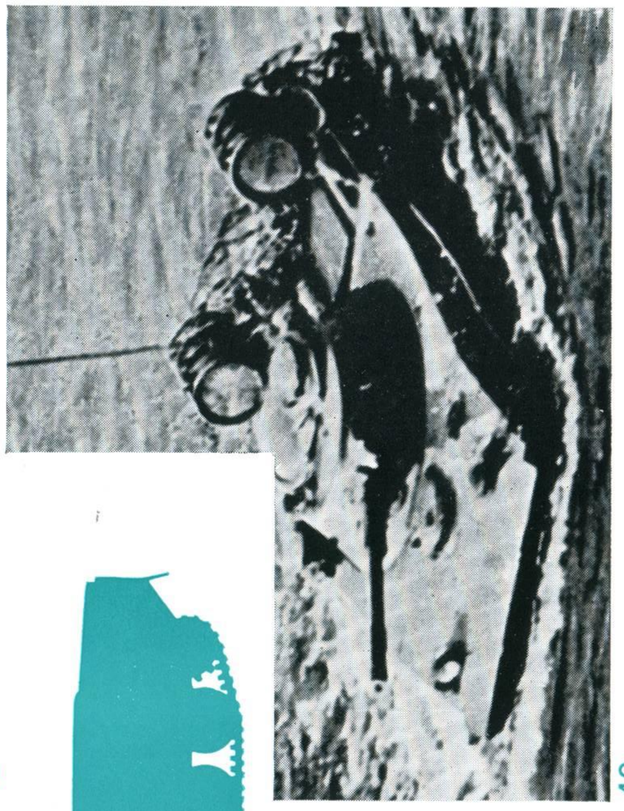


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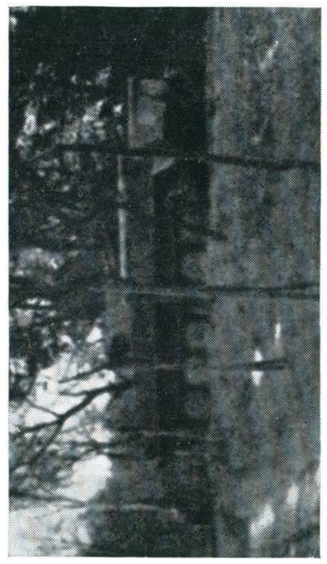
Lesson instructions are on page 311



46

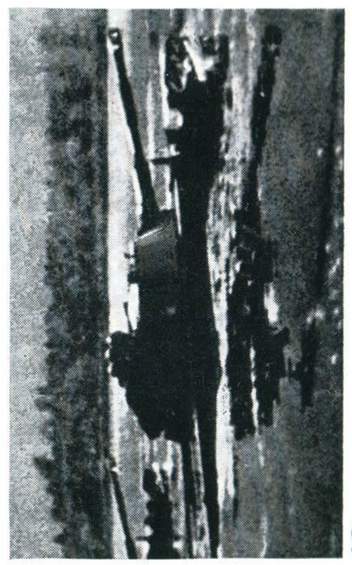


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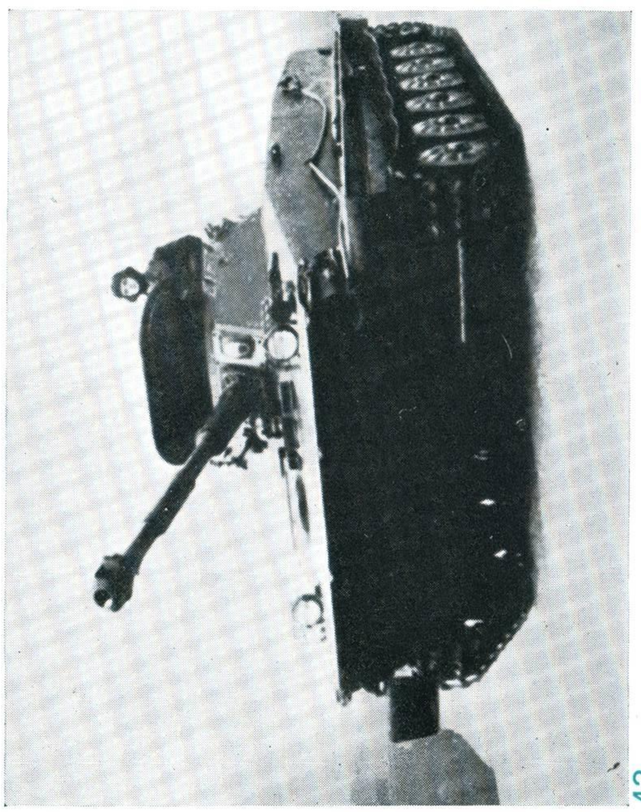


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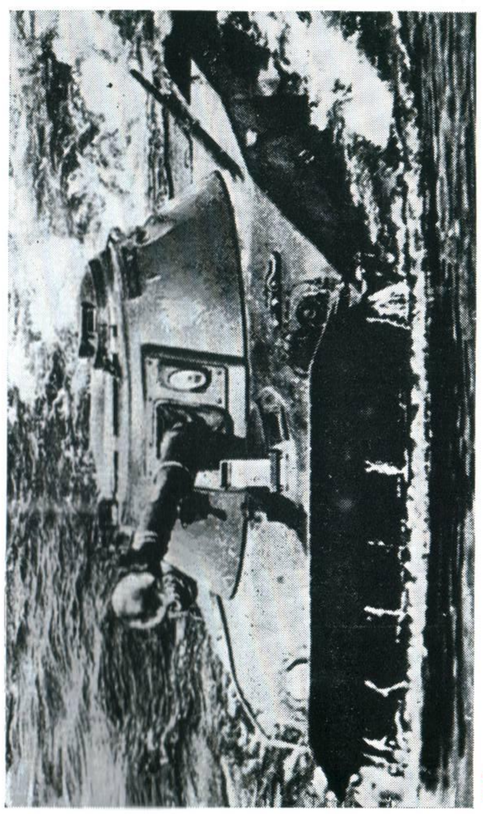




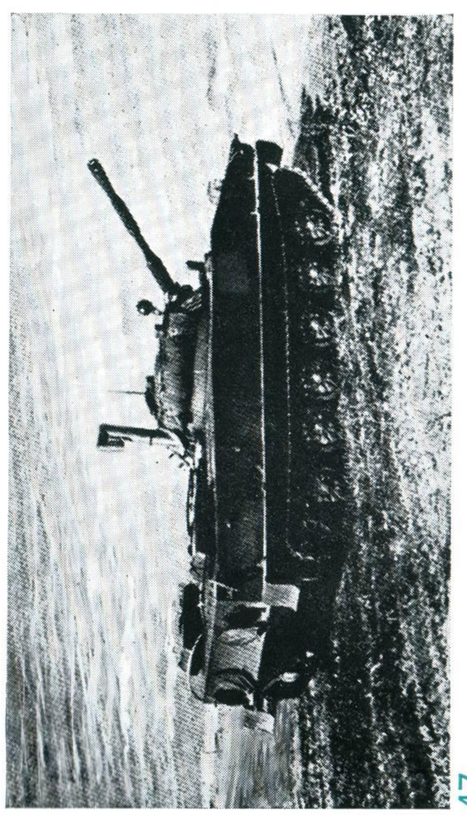
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Solutions on page 334

HERCULES C.1

The Lockheed C-130K Hercules C.1 now entering service with the Royal Air Force (which is to receive a total of sixty-six) is but one of more than 20 variants of this aptly-named transport, of which nearly 1,000 examples have now been built. Normal crew of the C-130K Hercules is five. A total of 92 troops, 64 paratroops, or 74 casualty stretchers plus two medical attendants can be accomodated.

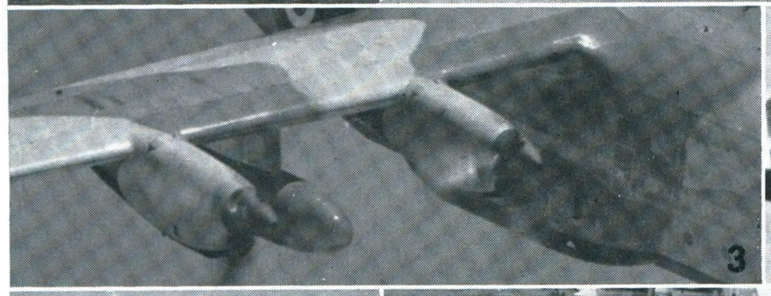
Other variants of the Hercules range from the early C-130A and 'B tactical transports to the HC-130P, the latest version, primarily intended for flight refuelling of Sikorsky HH-3E helicopters with the Aerospace Rescue and Recovery Service of the U.S.A.F.'s Military Airlift Command. In addition to serving with the U.S. Armed Forces and the R.A.F., the Hercules has been supplied to Australia, Brazil, Canada, Indonesia, Iran, New Zealand, Pakistan, Saudi Arabia, South Africa and Turkey.

continued overleaf




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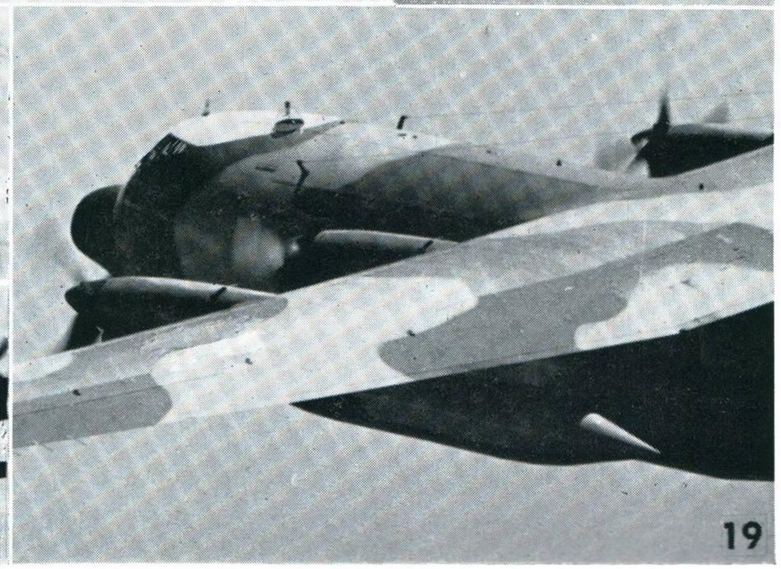

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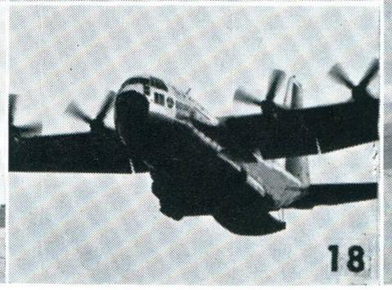

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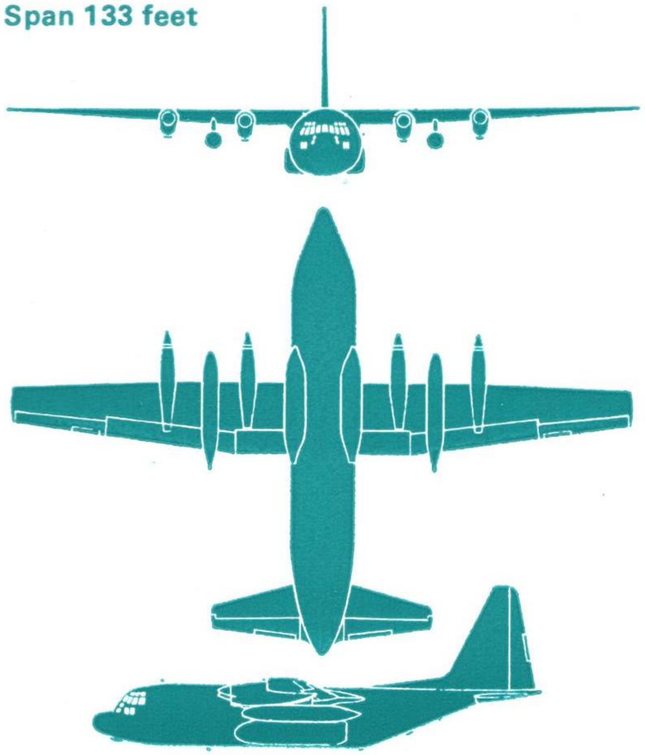

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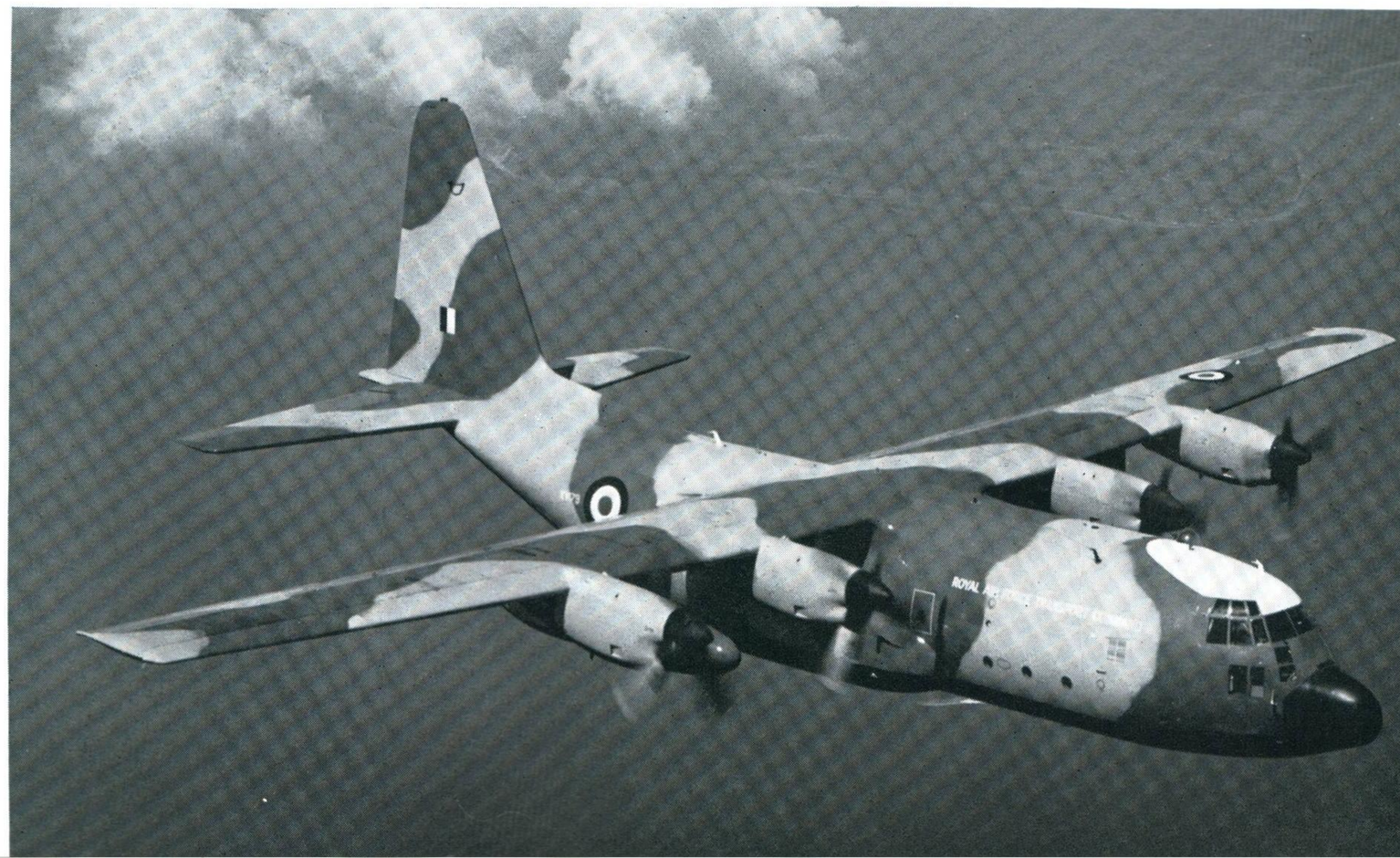

18

Lesson instructions are on page 311

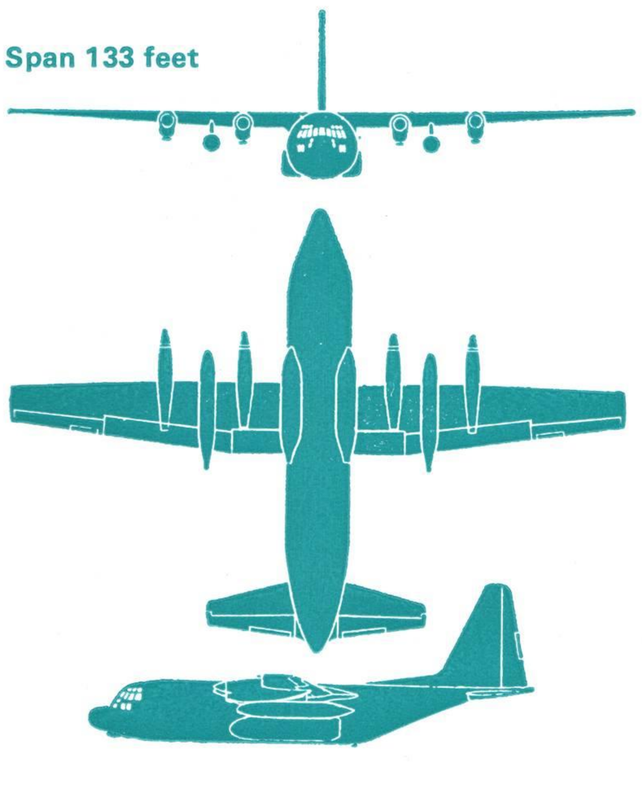
Solutions on page 334

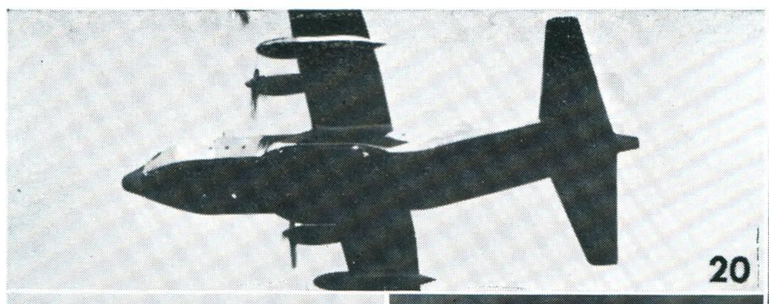
Span 133 feet





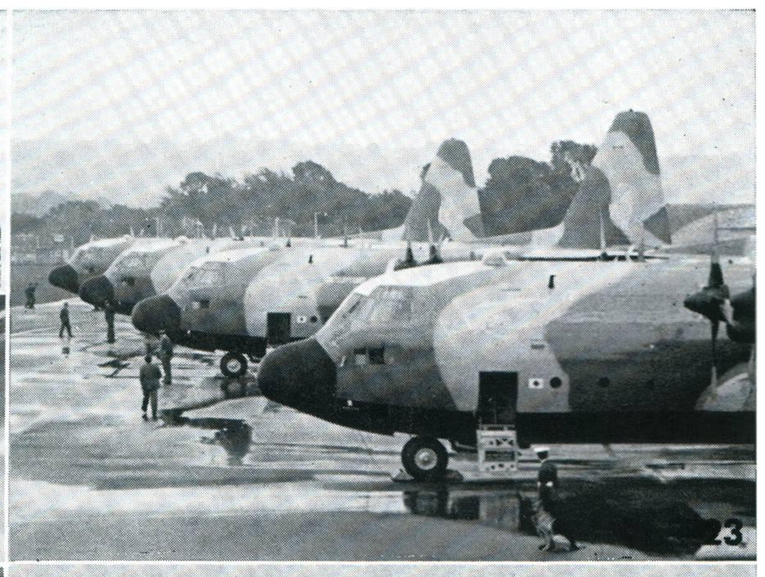
HERCULES C1 continued















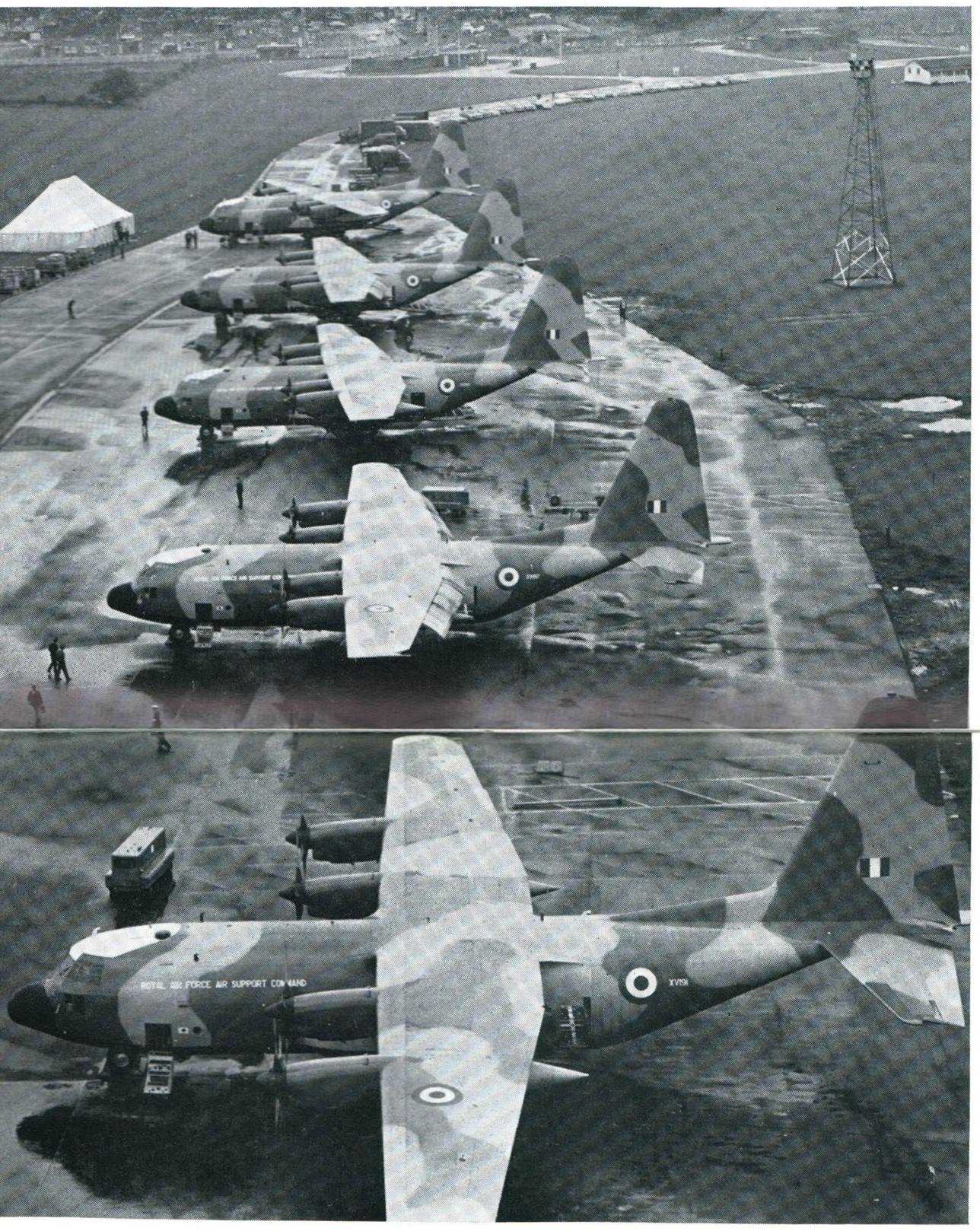




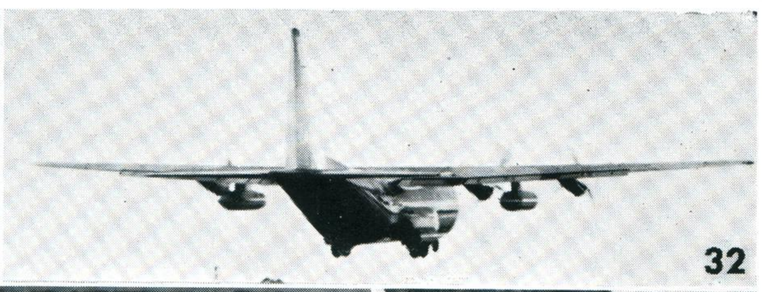


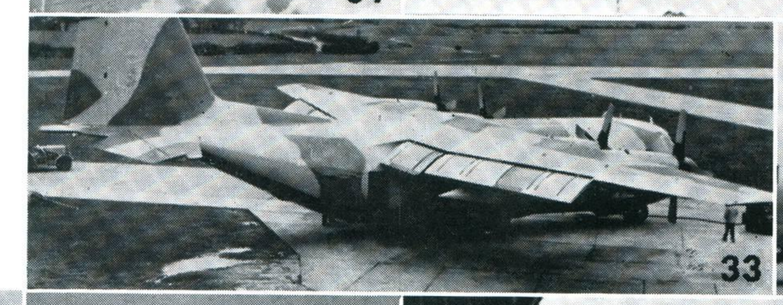














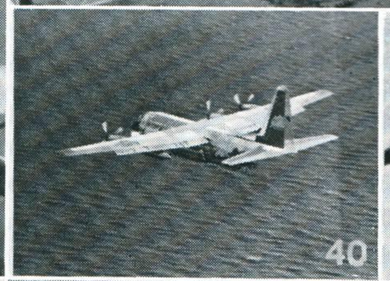










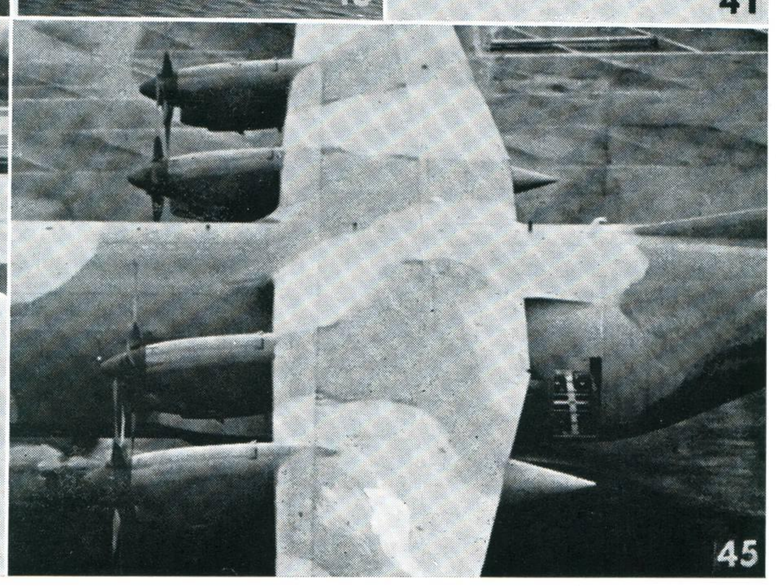










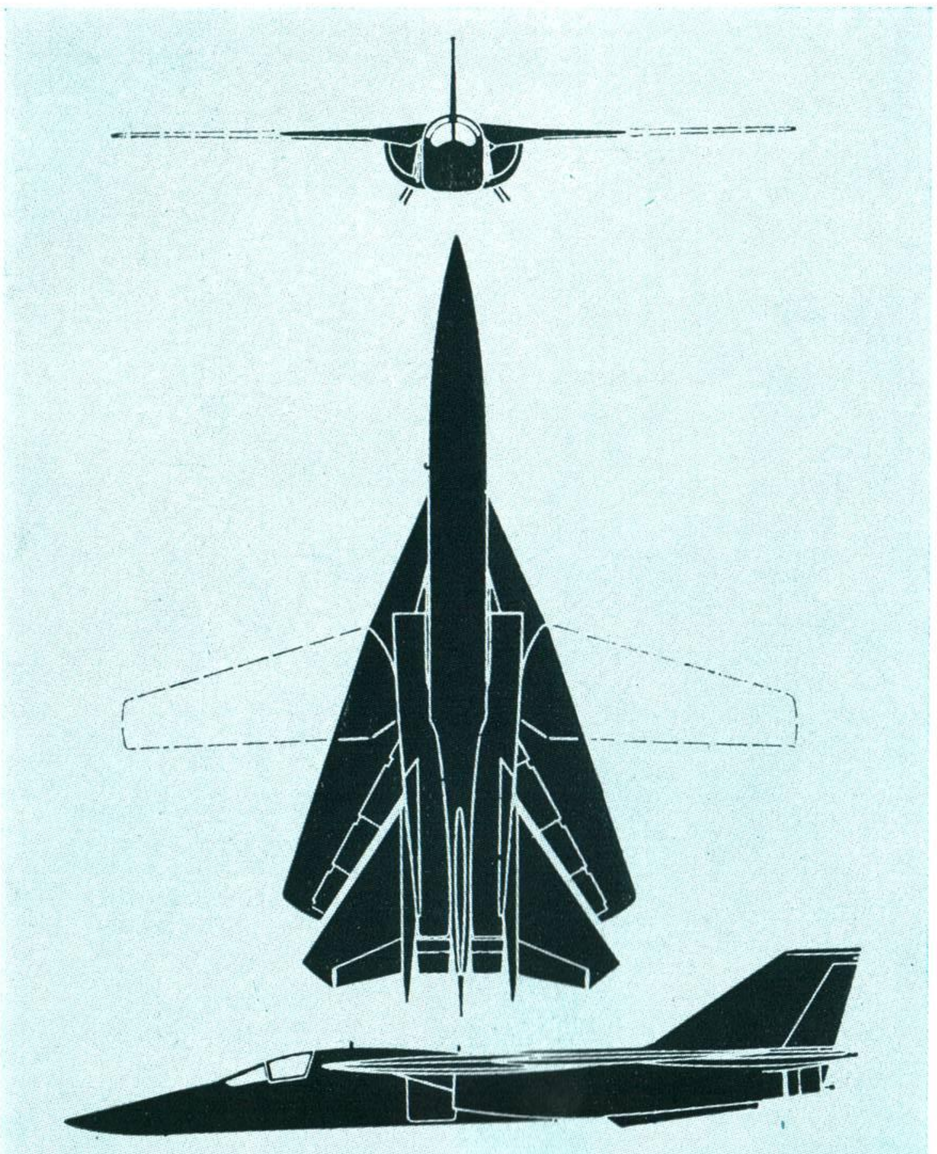


The original C-130A lacked the under-wing tanks seen on later versions; on the other hand variants with the U.S. Armed Forces may carry such under-wing stores as up to four Firebee drones, and some aircraft may have ski-type undercarriages. However, if you learn the basic Hercules from these target views of the R.A.F. version—keeping a sharp look-out for jokers—the others should present no difficulty however much festooned.

Lesson instructions are on page 311 and solutions on page 334.

Maximum Span 63 feet Minimum Span 32 feet

Lesson instructions are on page 311 *Solutions on page 334*

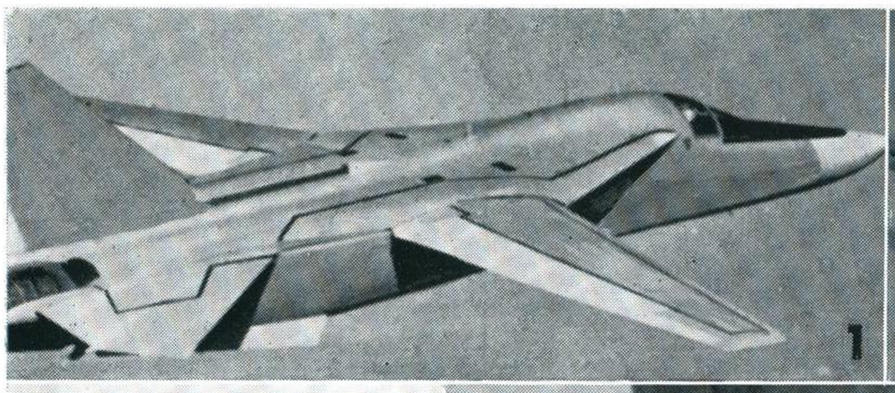


F-111

Now in action with the USAF in Vietnam, the General Dynamics F-111 swing-wing, 2-seat strike reconnaissance aircraft is in quantity production for the USAF (FB-111 interim strategic bomber, 64 ordered; F-111A with shorter span, 331 ordered) and the RAAF (F-111C, similar to F-111A, 24 ordered). A Fleet interceptor version, known as the F-111B, which was to have been supplied to the US Navy, has long suffered from serious technical problems and it seems that this project is now being abandoned.

The F-111 embodies the variable geometry principle invented by Dr. Barnes Wallis of the British Aircraft Corporation, and the first prototype—one of 18 research and development F-111As—flew on December 21, 1964.

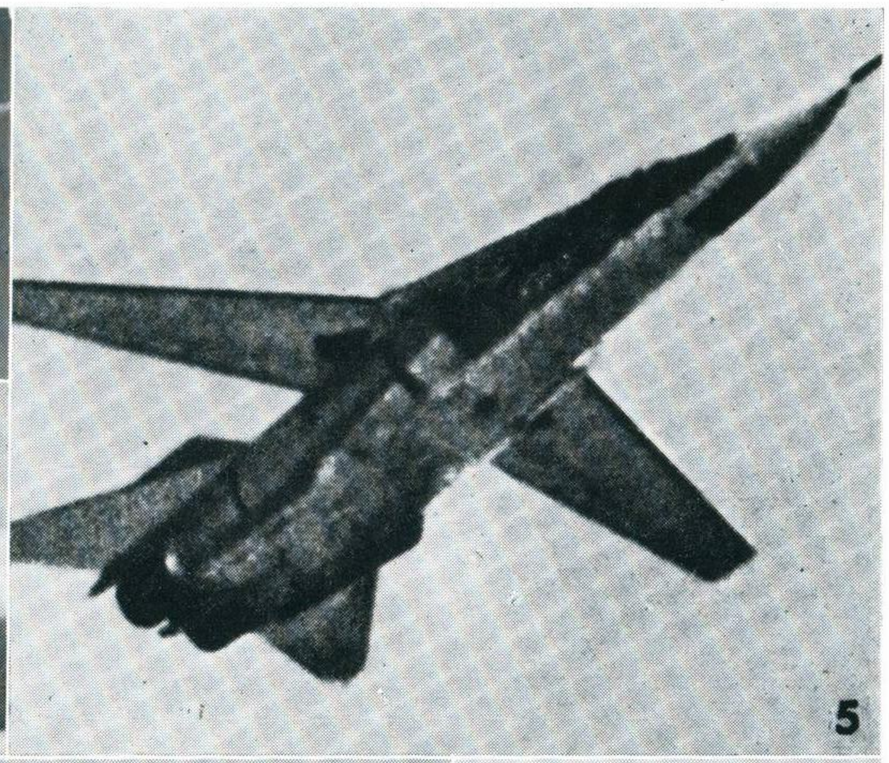
N.B.—A number of photographs of the F-111 in this lesson bear R.A.F. markings. The R.A.F. order for this aircraft has since been cancelled. The photographs are, nevertheless, valuable for recognition training purposes since the basic shape characteristics remain.



1



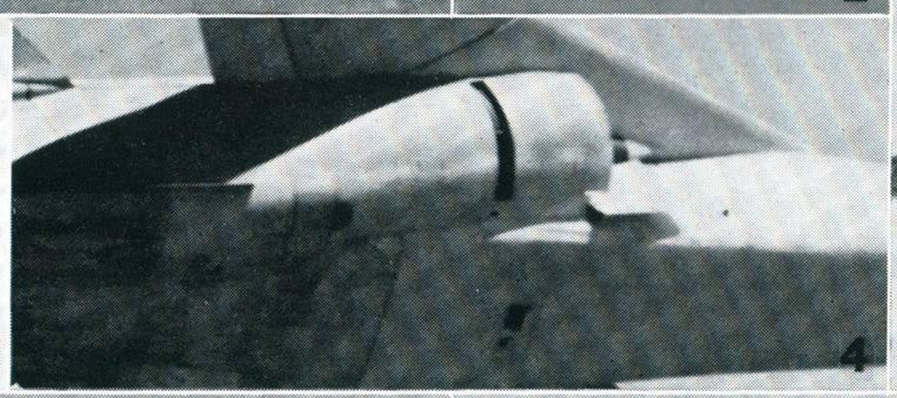
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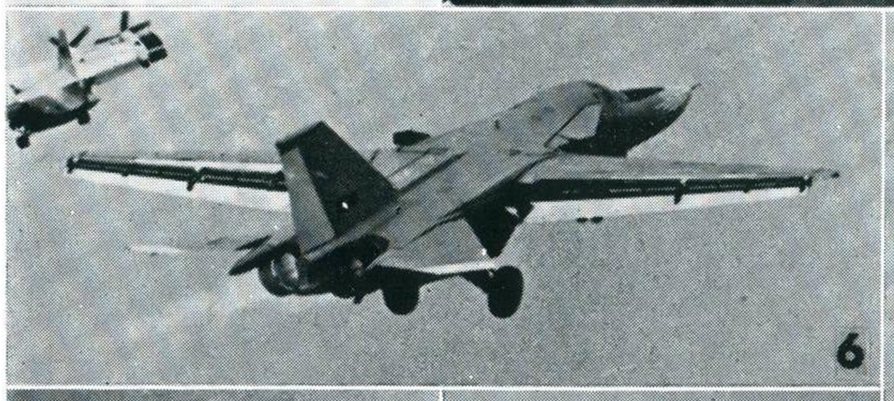
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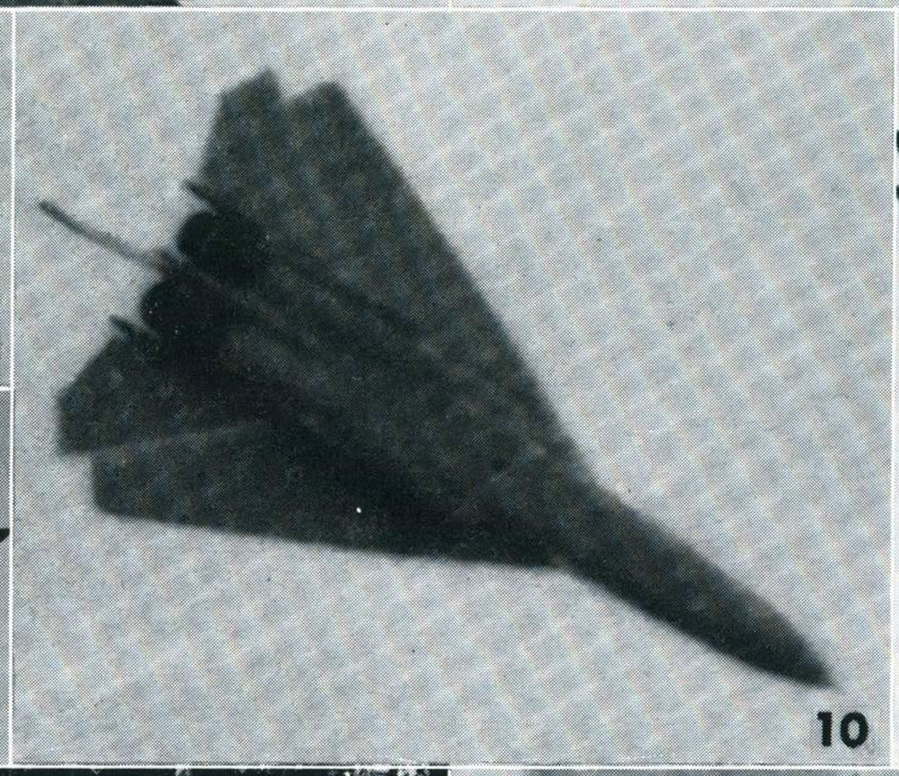
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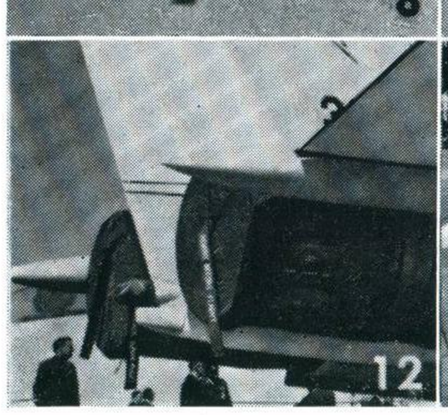
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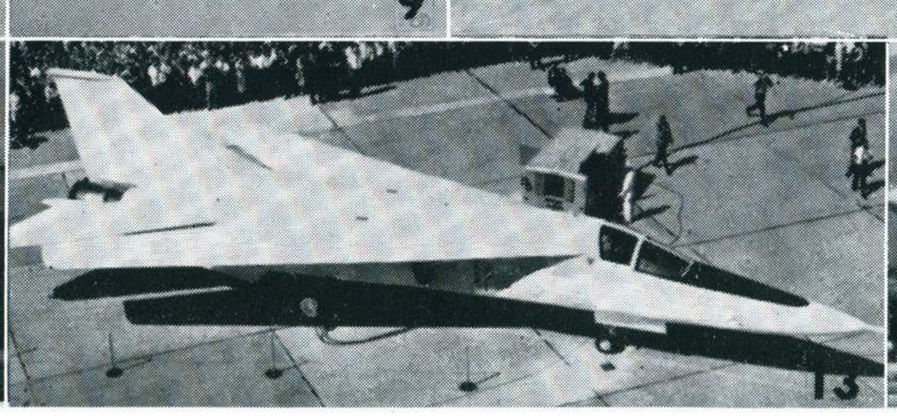
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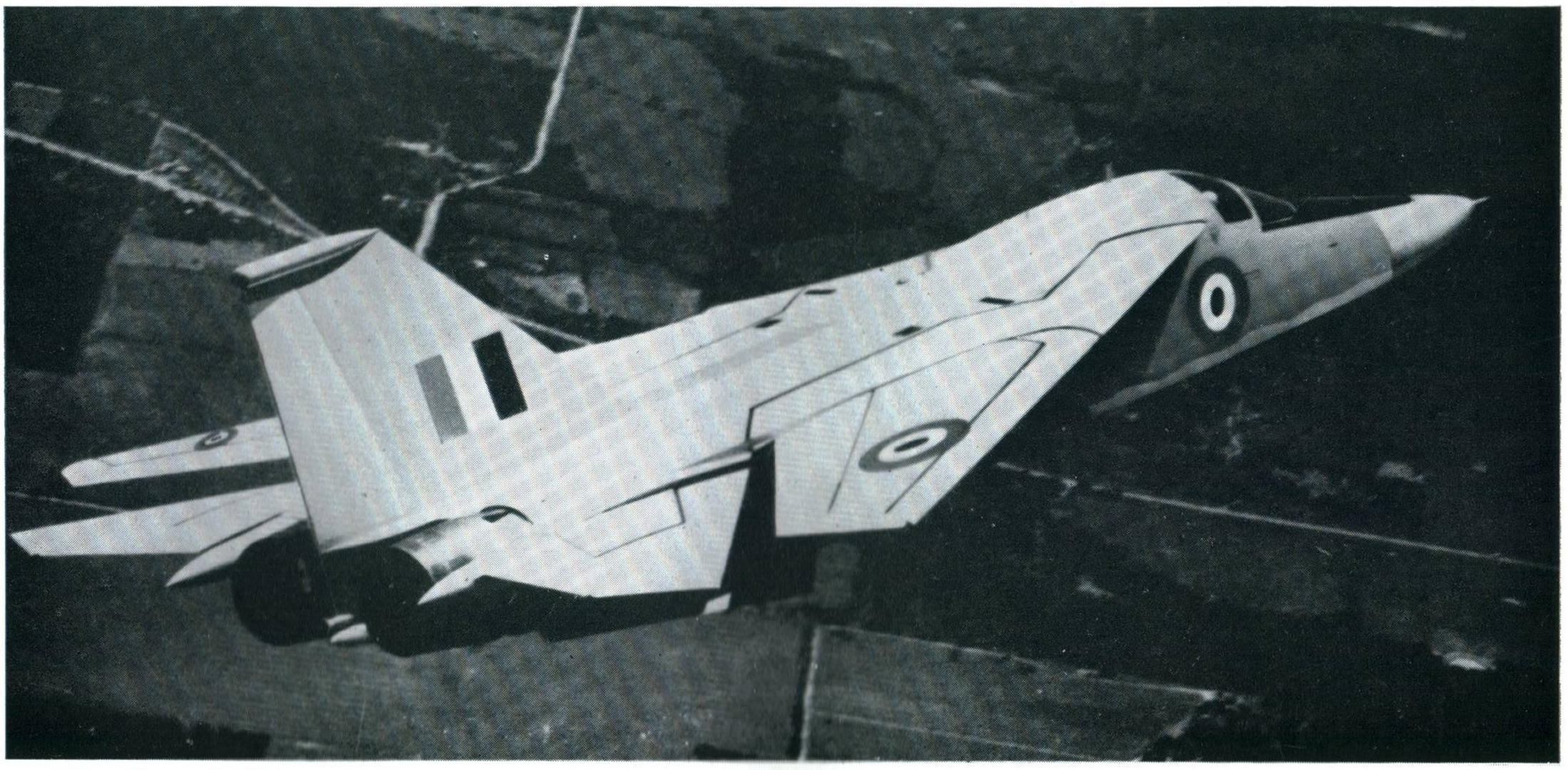
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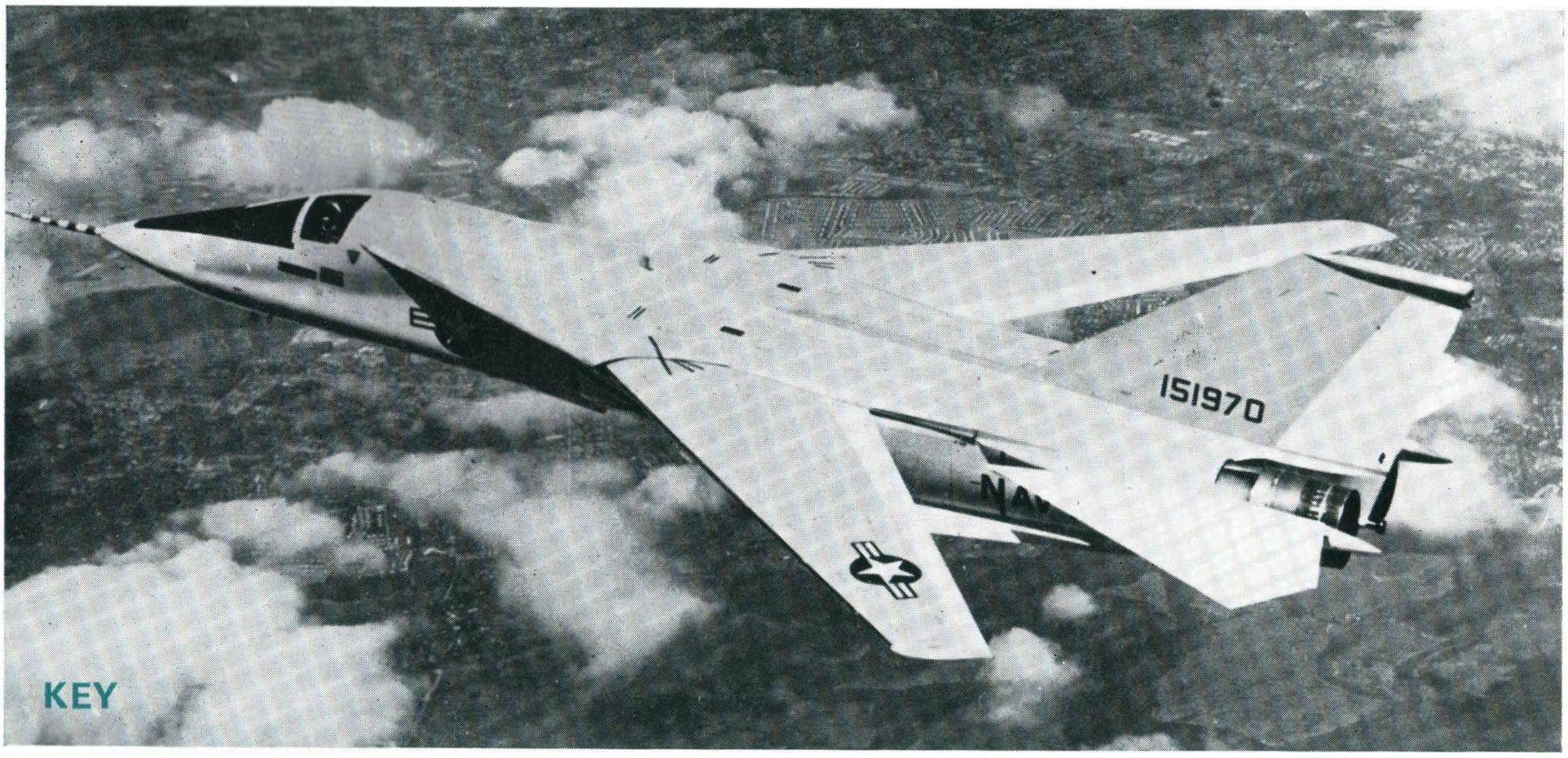
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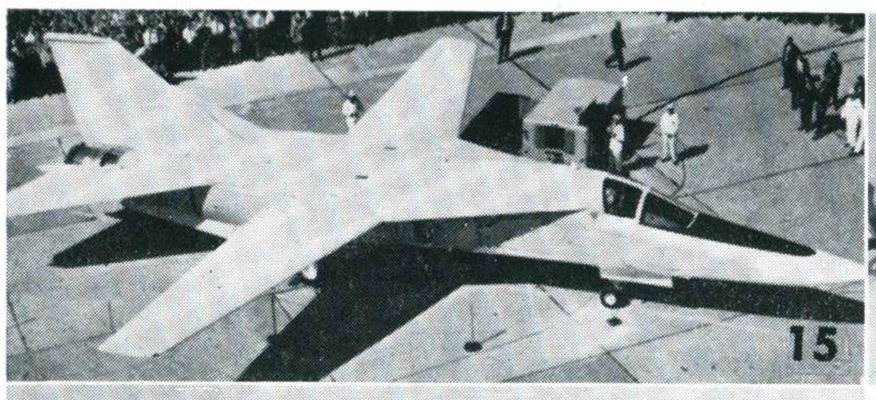
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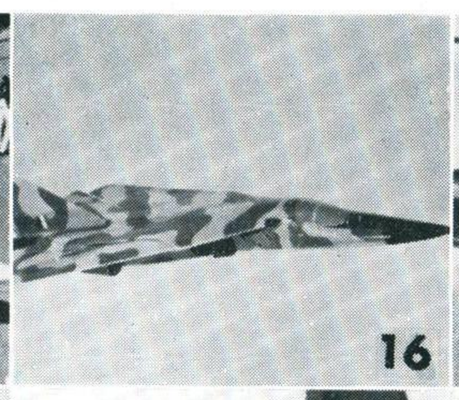


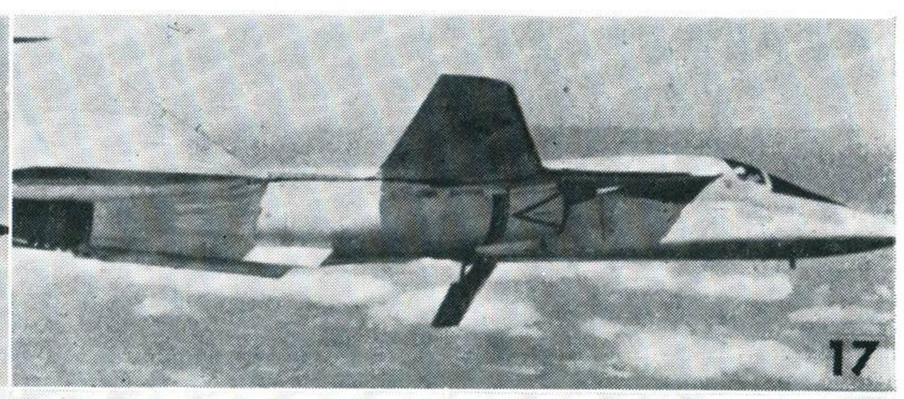
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F-111 *continued*


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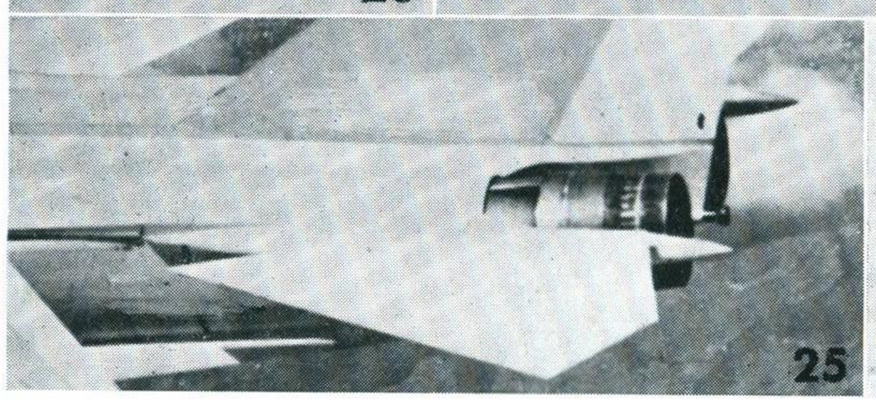

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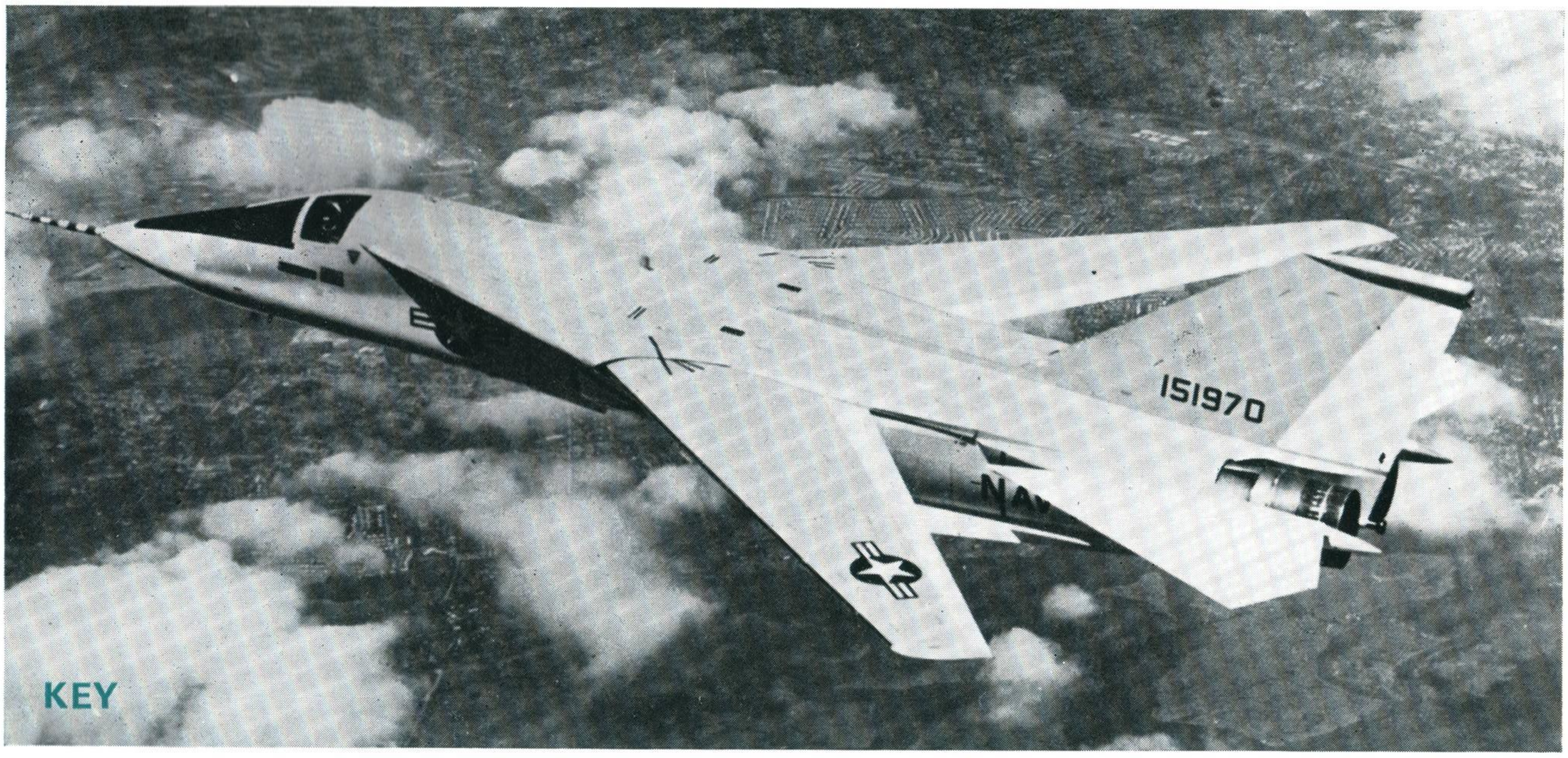

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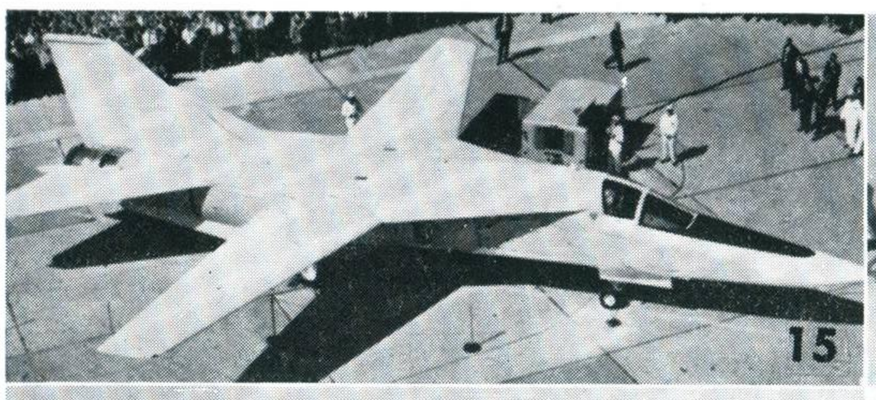
Span of the F-111A is 63 feet (maximum sweep 31 feet 11 inches), Length 73 feet 6 inches.

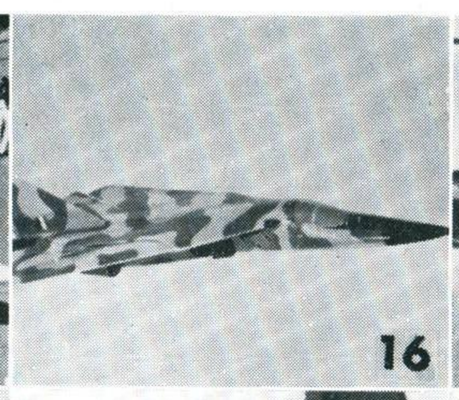
Study the key views carefully, bearing in mind that the F-111 can be seen in unswept, partially-swept and fully-swept configuration—it can, in fact change shape rapidly (to quote Arthur Askey) "before your very eyes". Follow the instructions on page 311, and report these targets as F-111's, or otherwise if jokers.

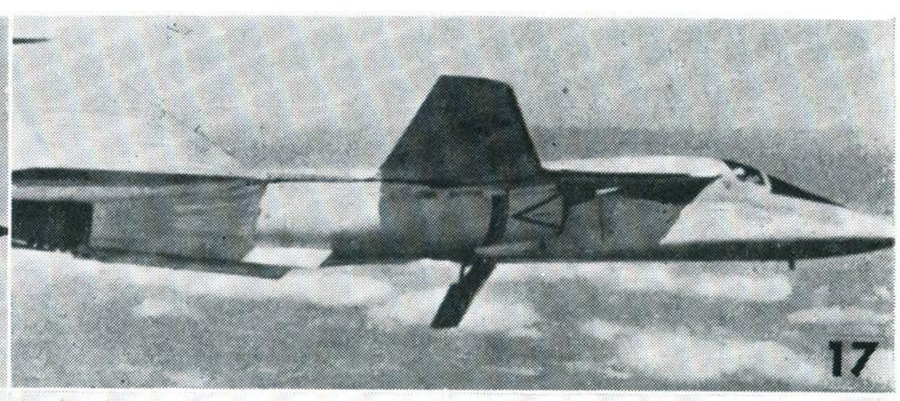
Solutions on page 334.



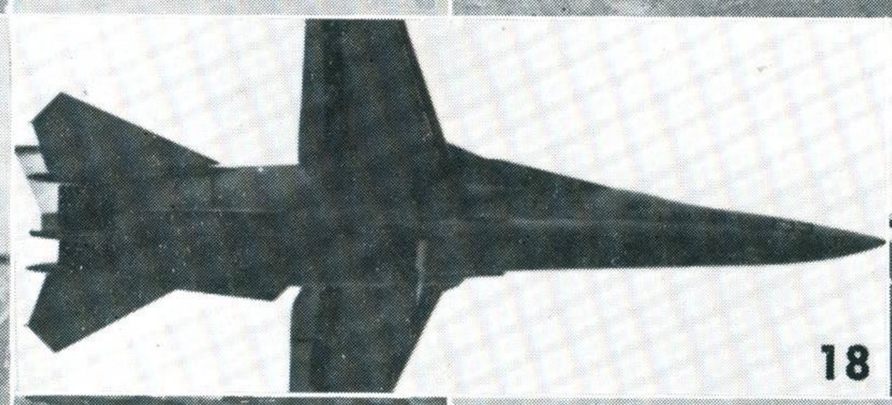
F-111 *continued*


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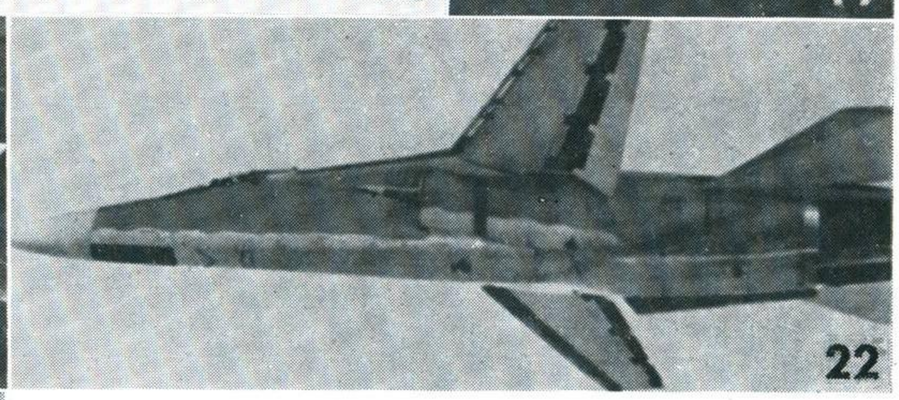

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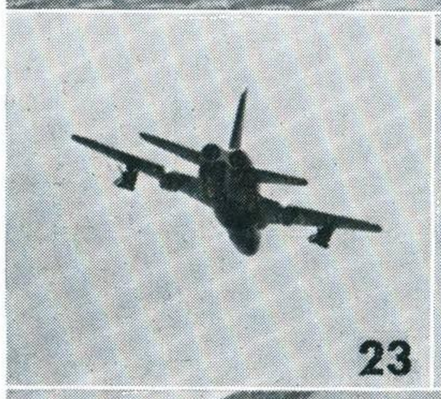

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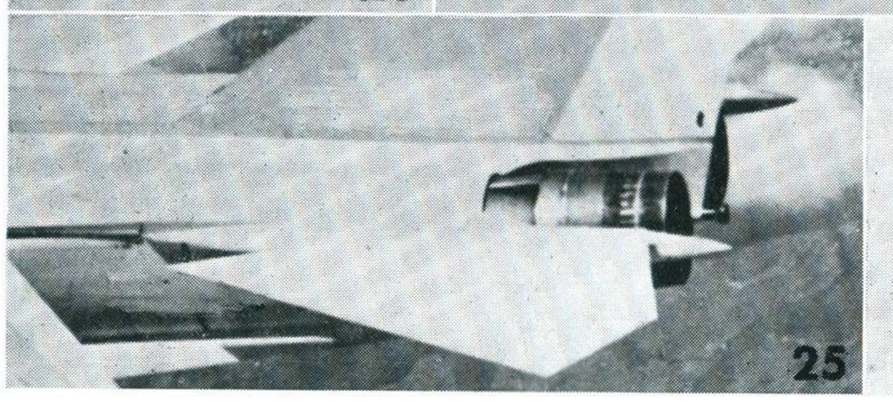

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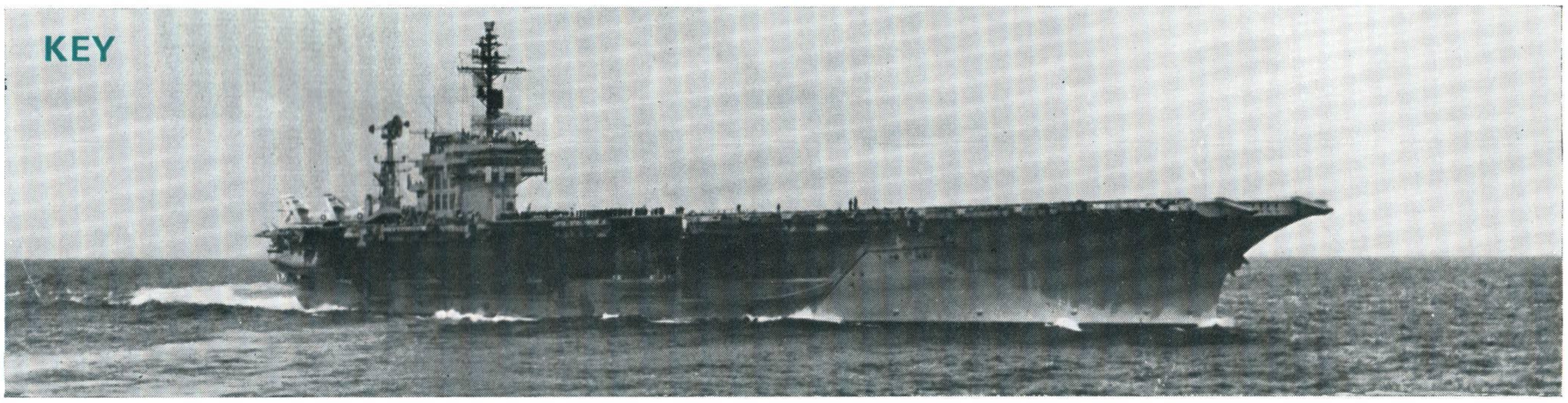

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Span of the F-111A is 63 feet (maximum sweep 31 feet 11 inches), Length 73 feet 6 inches.

Study the key views carefully, bearing in mind that the F-111 can be seen in unswept, partially-swept and fully-swept configuration—it can, in fact change shape rapidly (to quote Arthur Askey) "before your very eyes". Follow the instructions on page 311, and report these targets as F-111's, or otherwise if jokers.

Solutions on page 334.



USS KITTY HAWK

This large Attack Carrier and her immediate sister, *Constellation*, are the later units of the Forrestal Class.

Of 60,000 tons standard displacement and 79,000 tons full load, she measures 1,063 feet in length overall.

Her extreme width over flight deck is 252 feet.

Laid down at New York Shipbuilding Corporation's yard, New Jersey, in 1956, she was completed for service in 1962.

The area of the flight deck is over four acres and her geared turbines of 280,000 shaft horse power are connected to four screws and give a service speed of 35 knots.

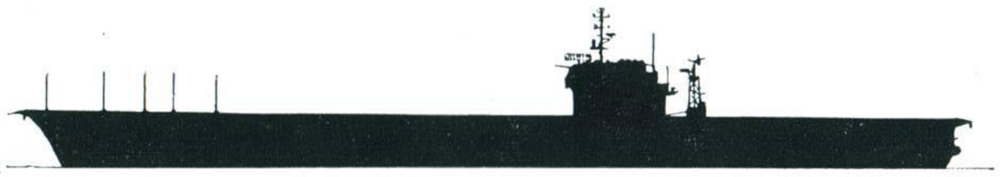
She has two twin Terrier missile launchers and carries up to 90 aircraft according to types.

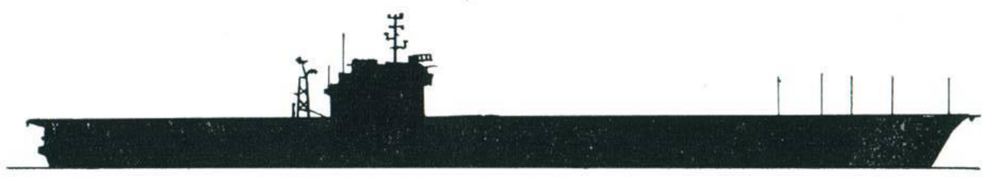
Her complement is about 2,700, exclusive of air personnel, and she can accommodate a total of about 4,500.

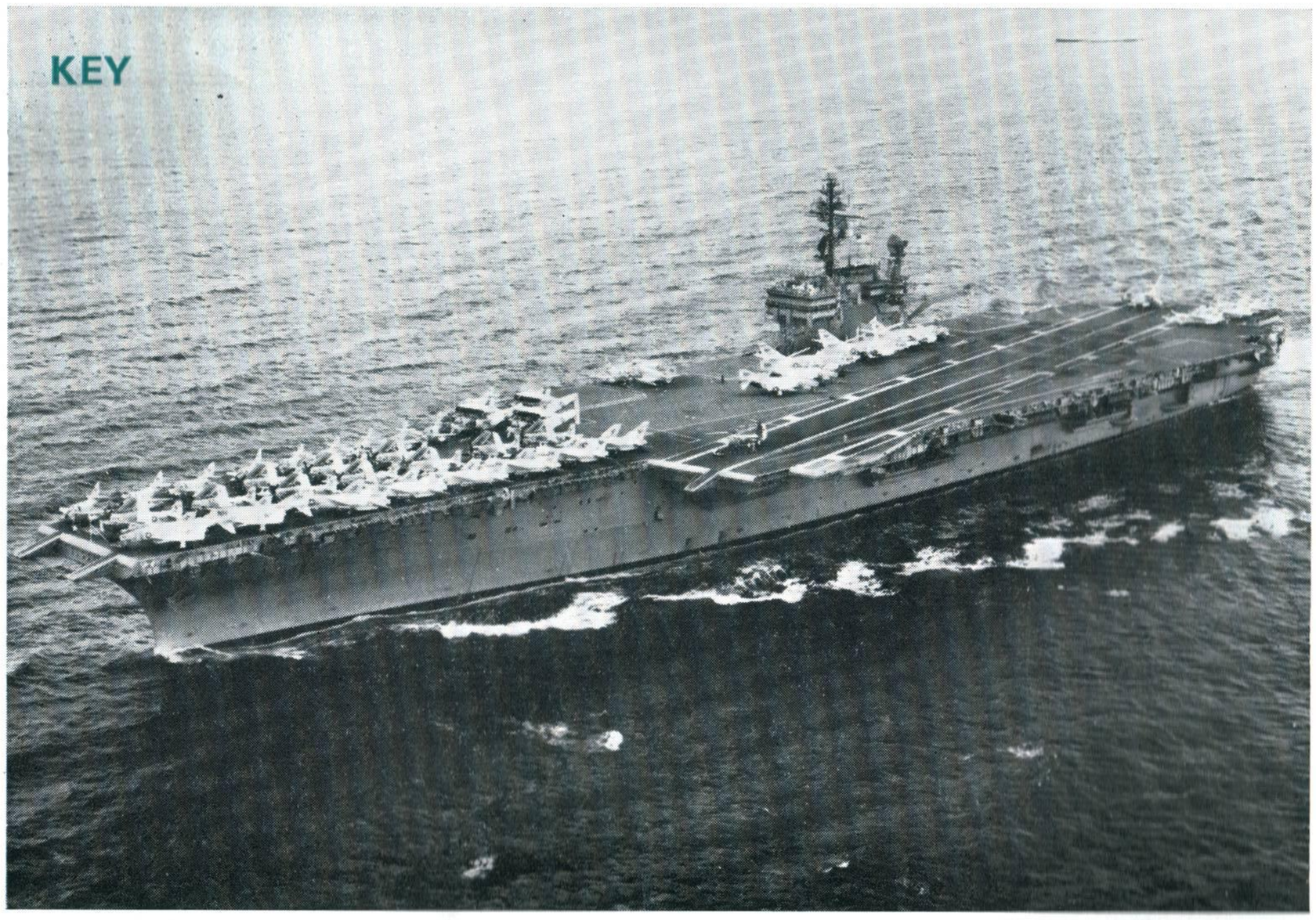
These two carriers can be immediately distinguished from the four other ships by having a smaller superstructure set much further aft, with a lattice mast at some distance abaft this.

Their counters are also of different appearance.

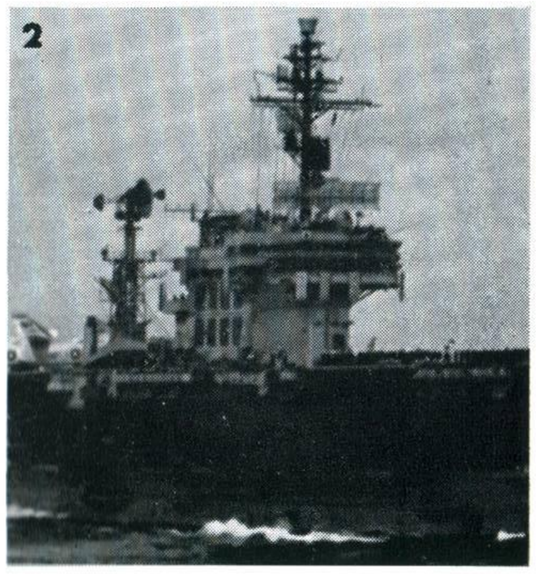
Lesson instructions are on page 311, and the solutions are on page 334.

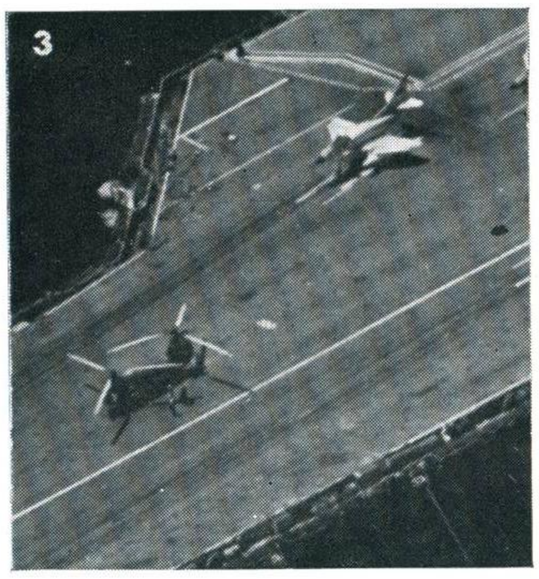


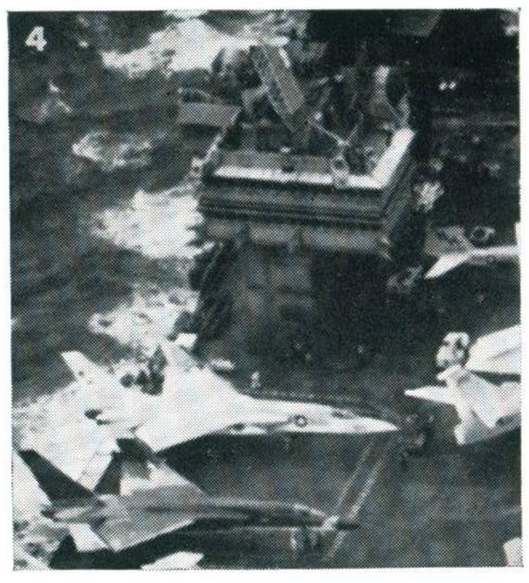


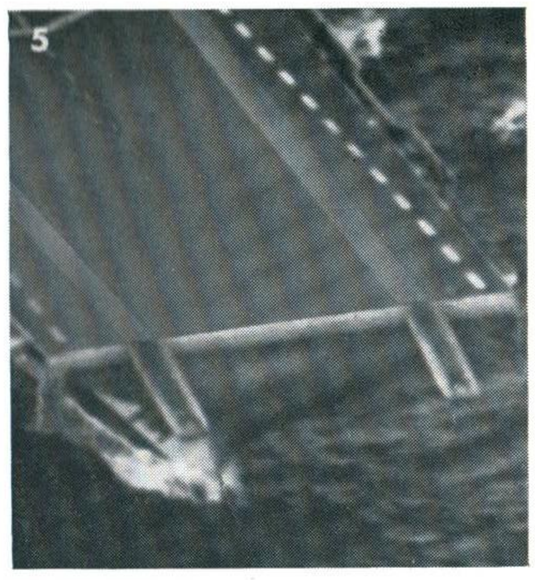




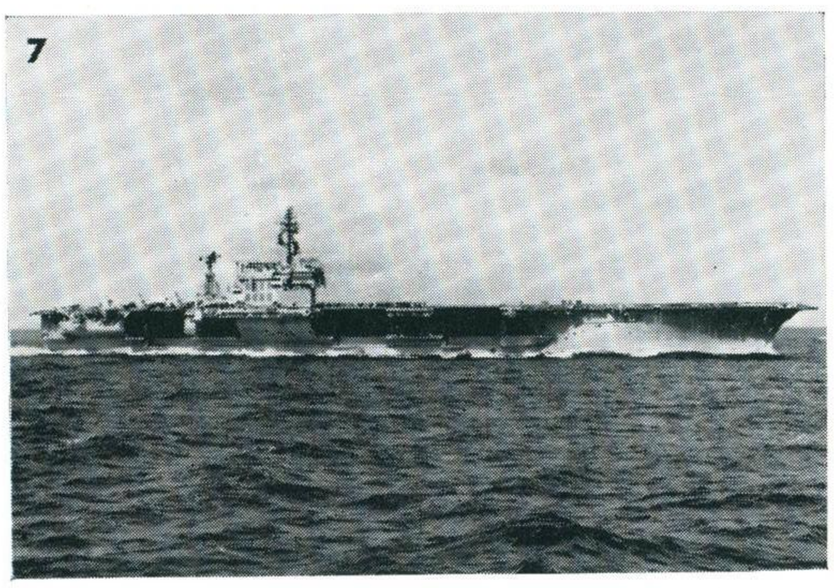


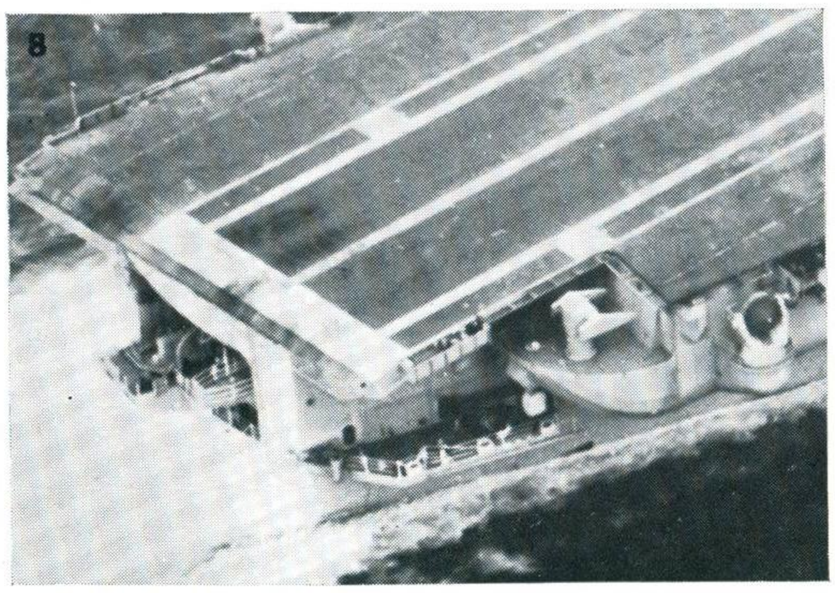




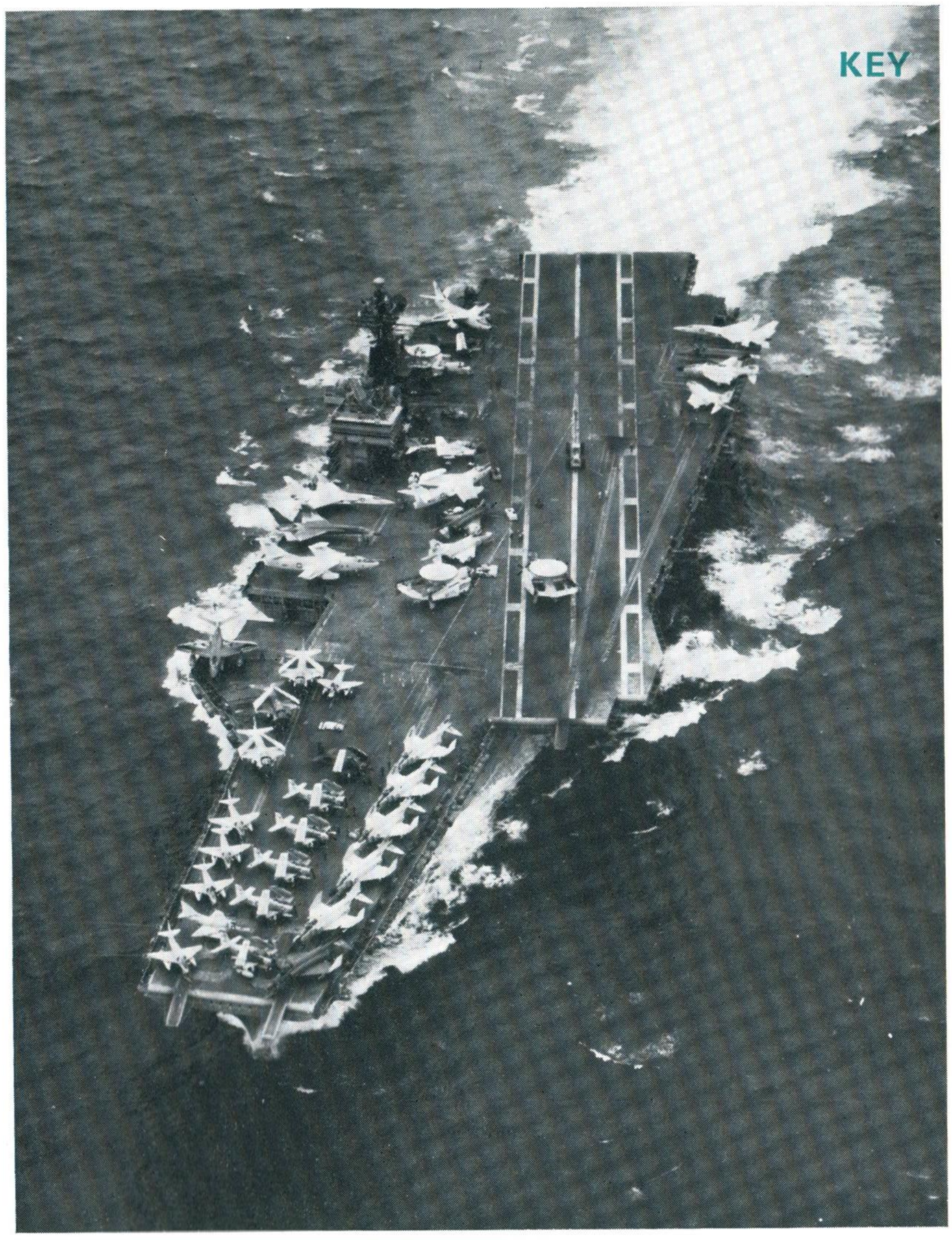


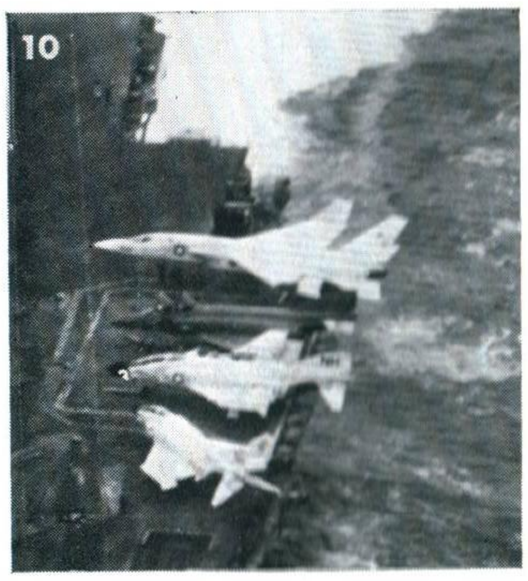


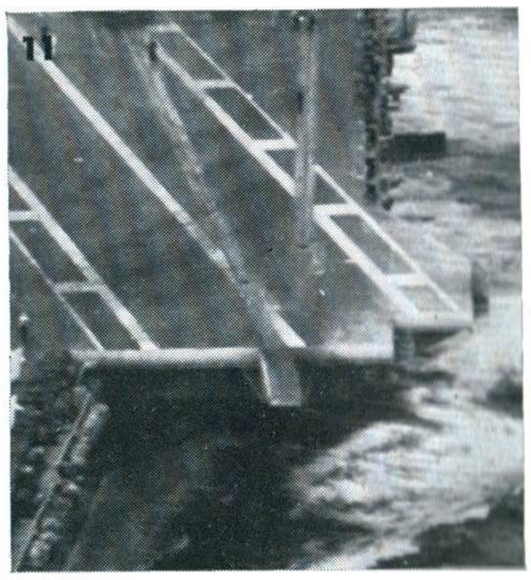


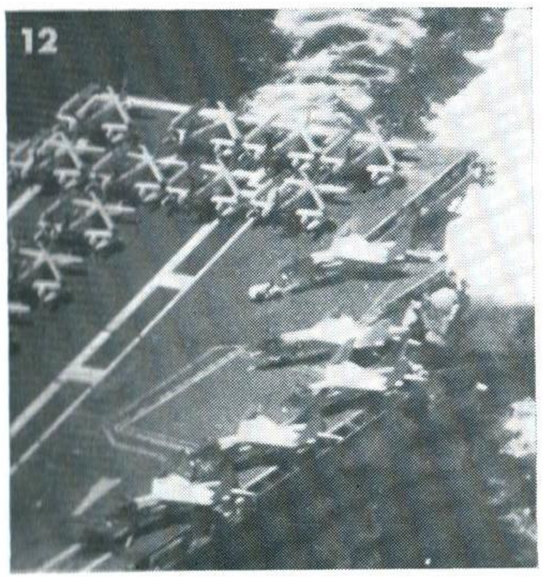


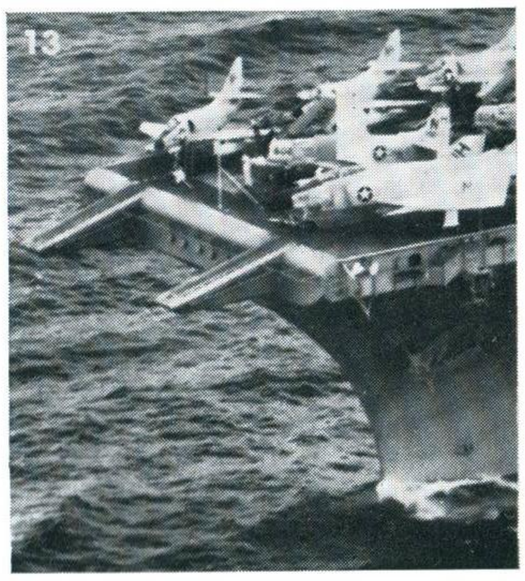




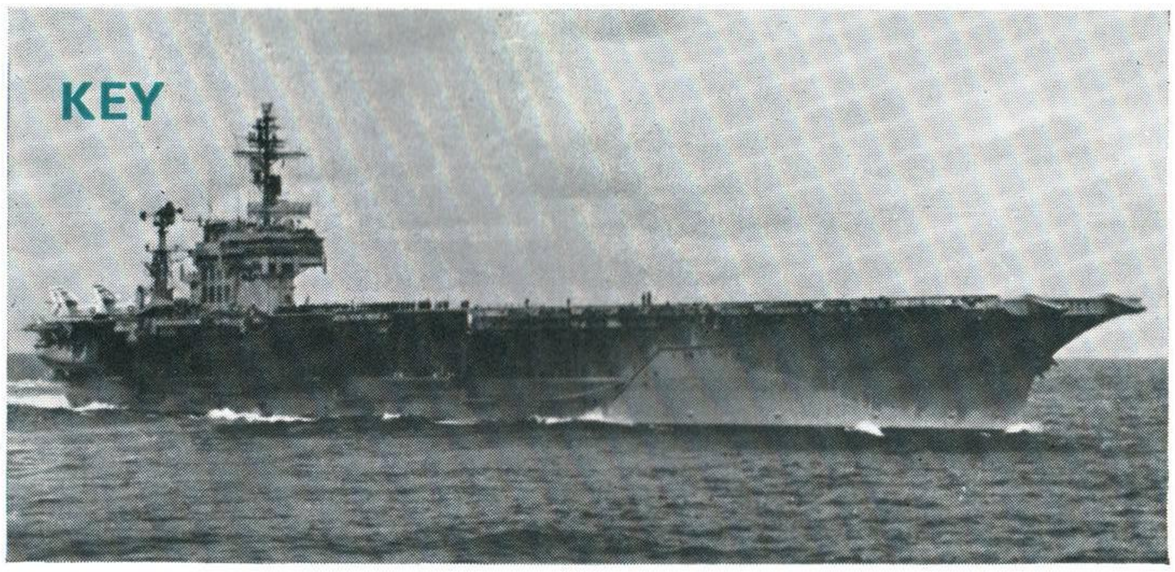




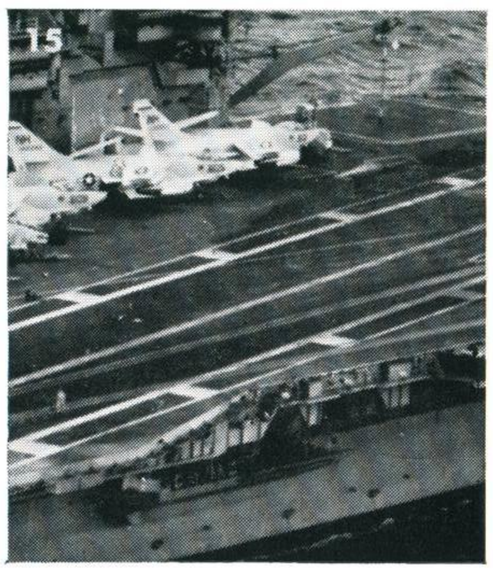




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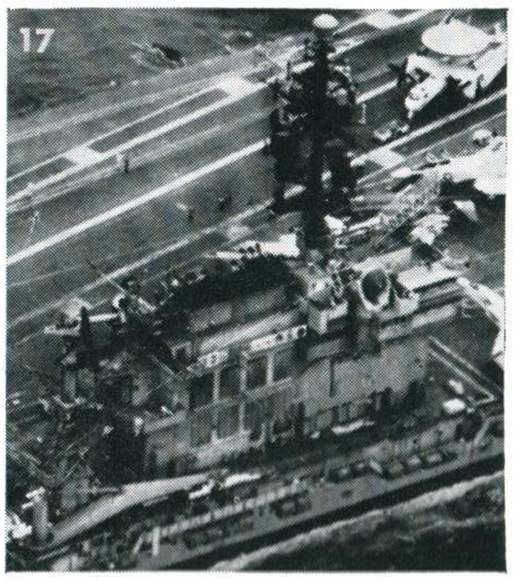


U.S.S. KITTY HAWK *continued*

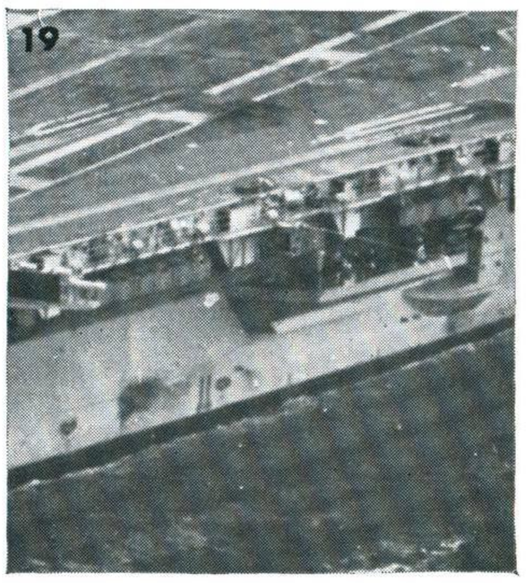


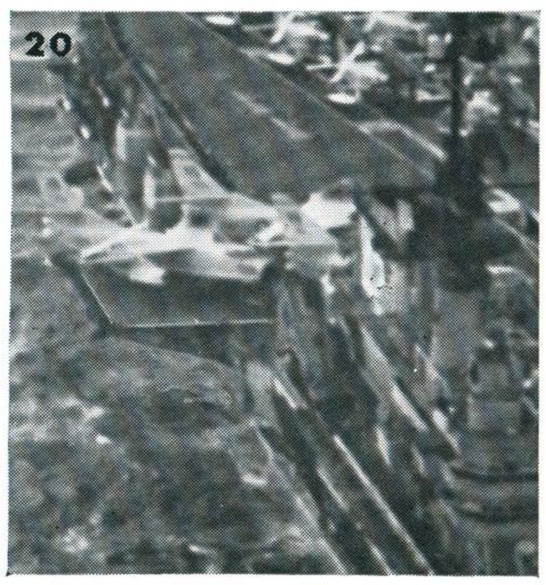
Lesson instructions are on page 311

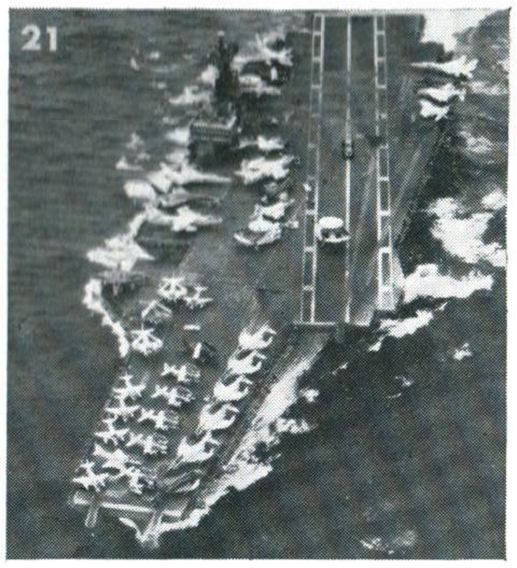
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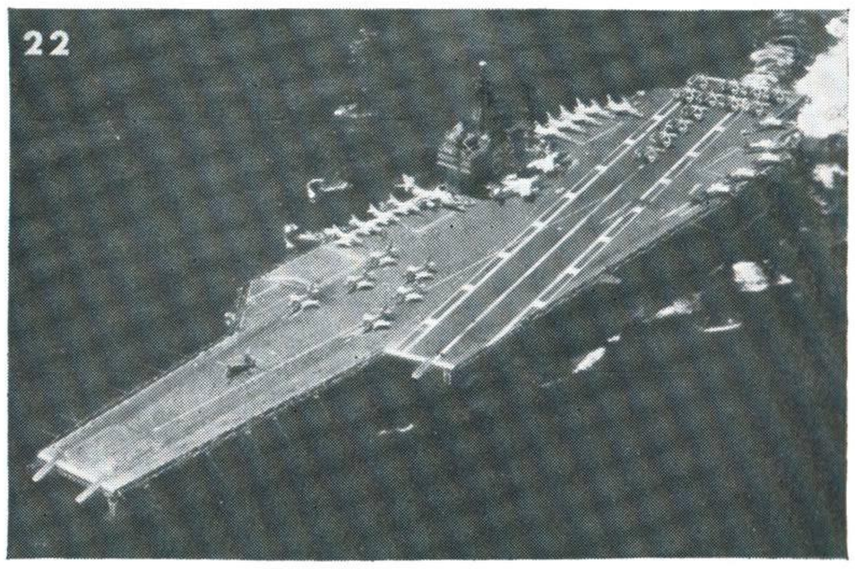


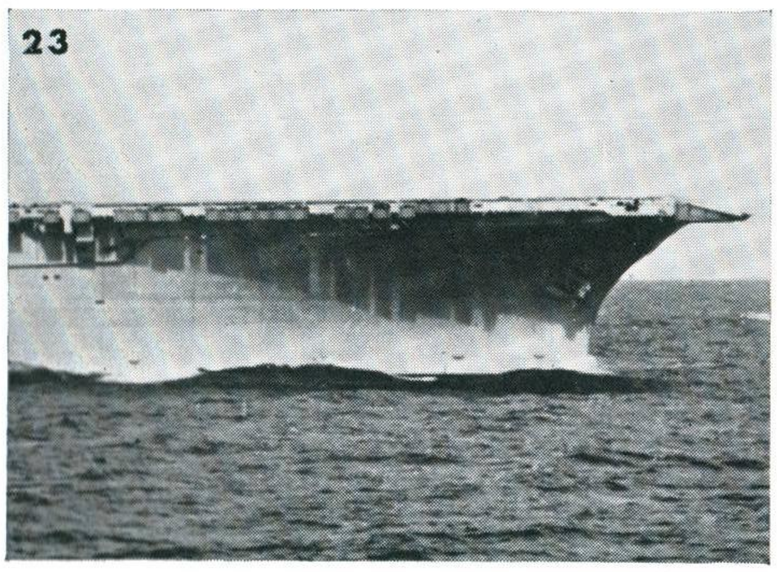


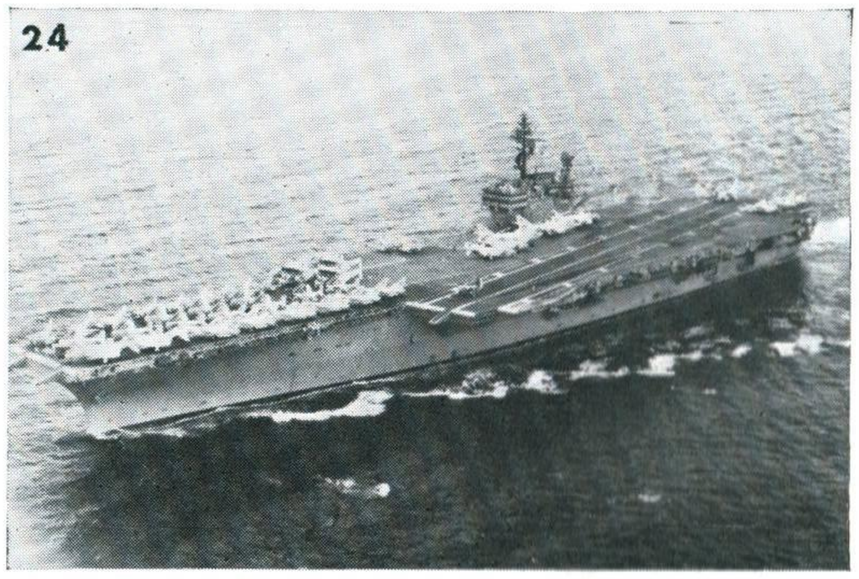


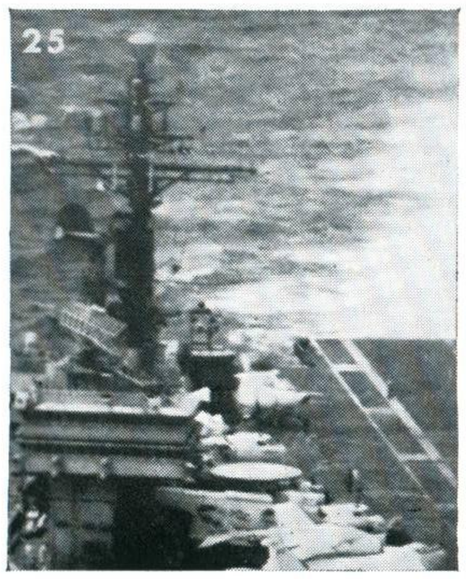


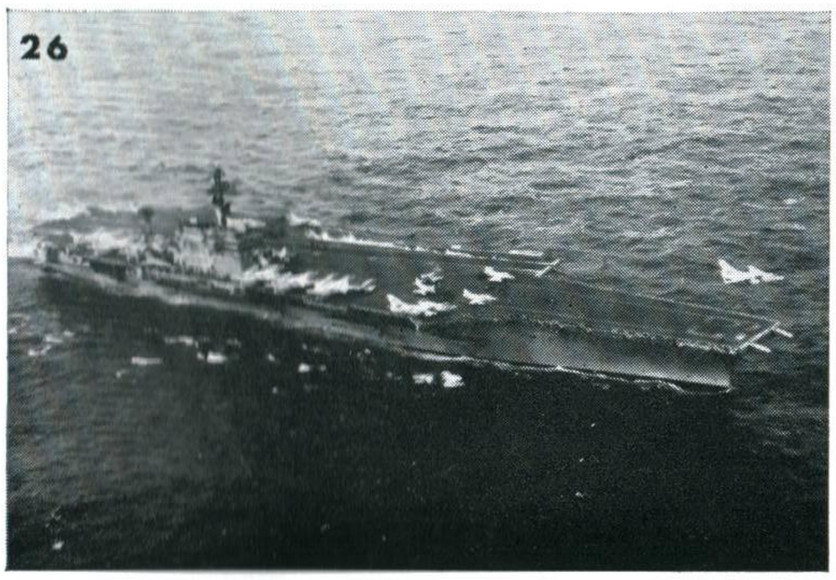


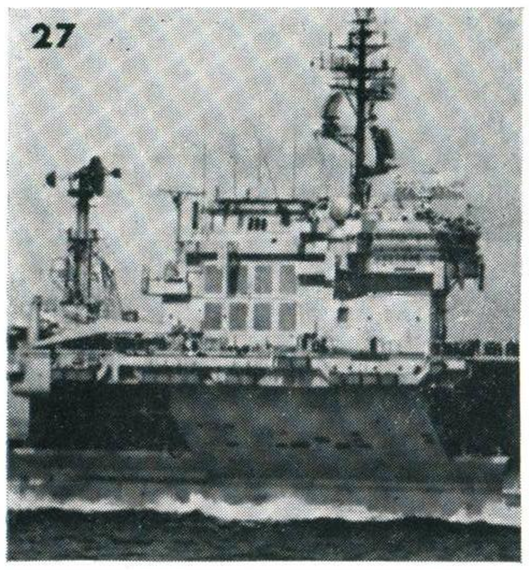


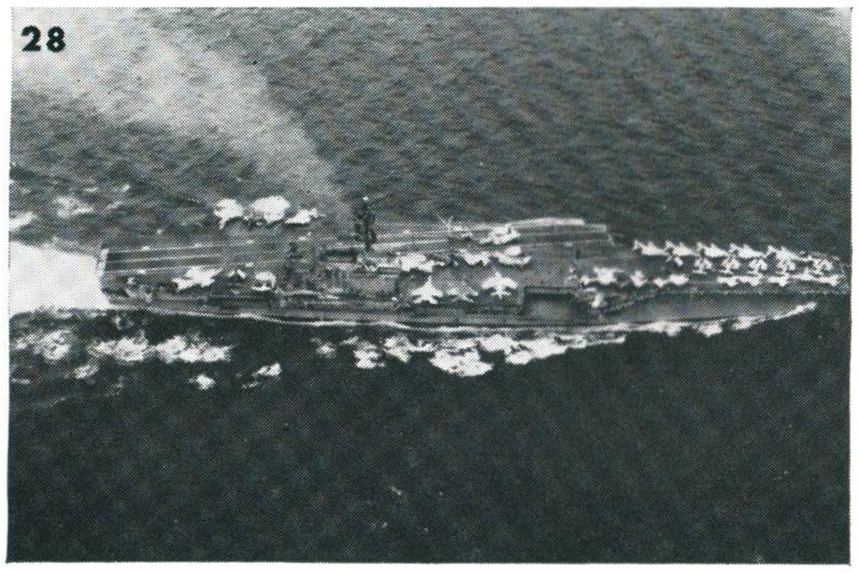


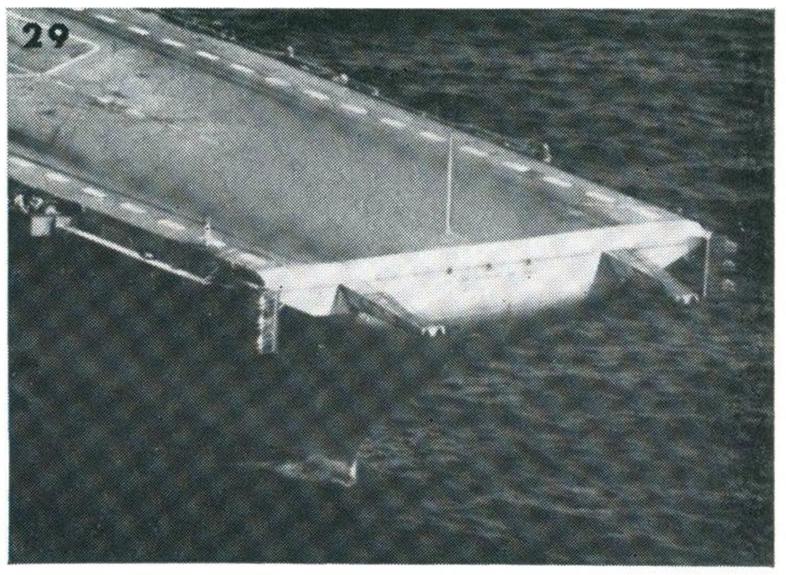


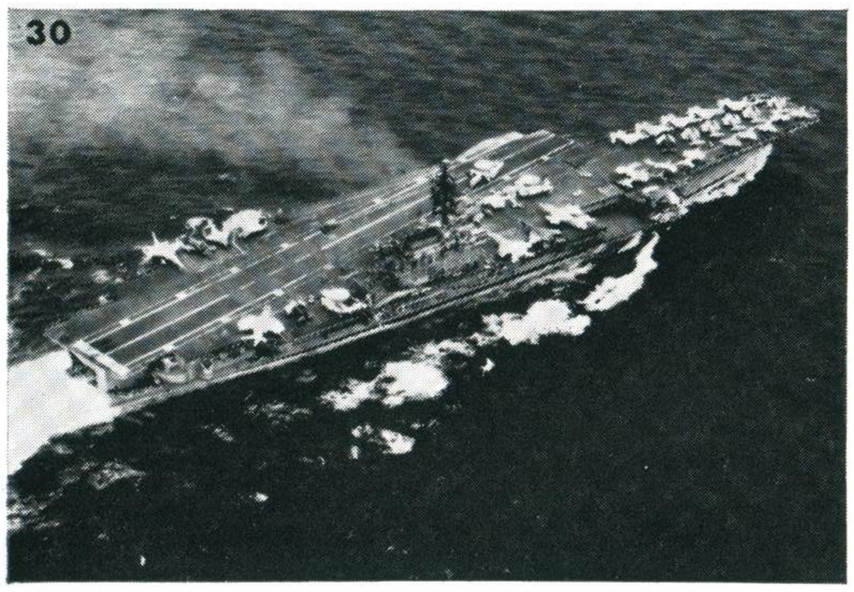




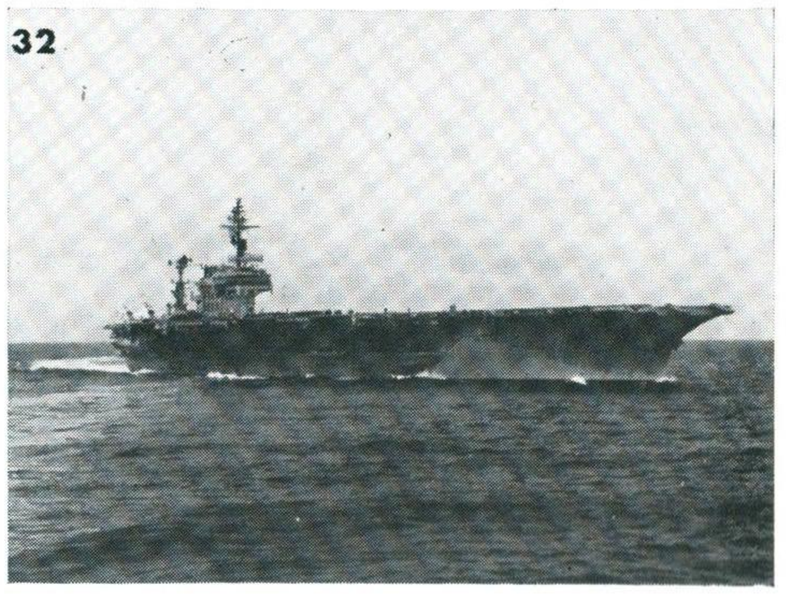

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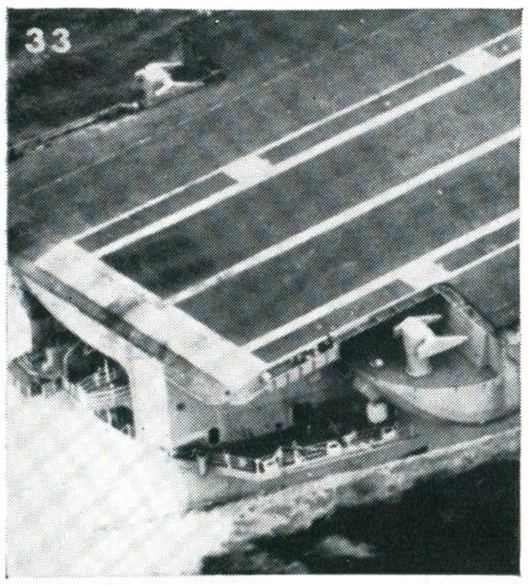

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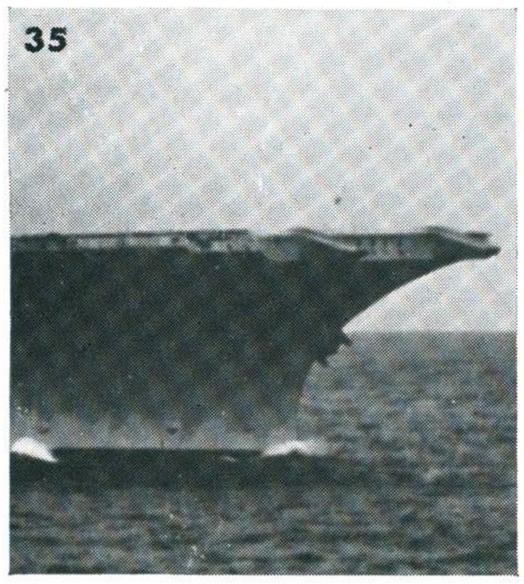

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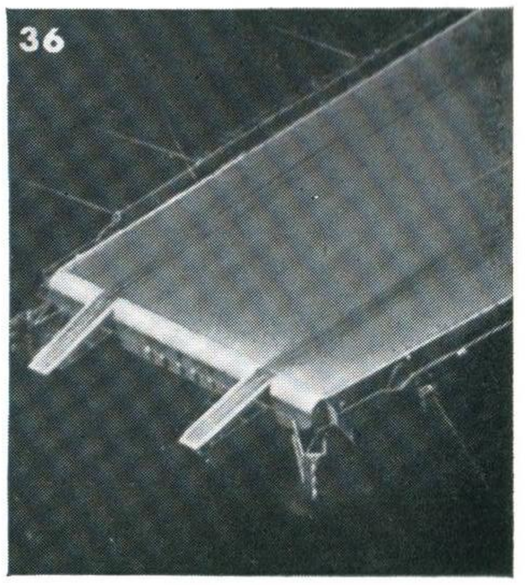

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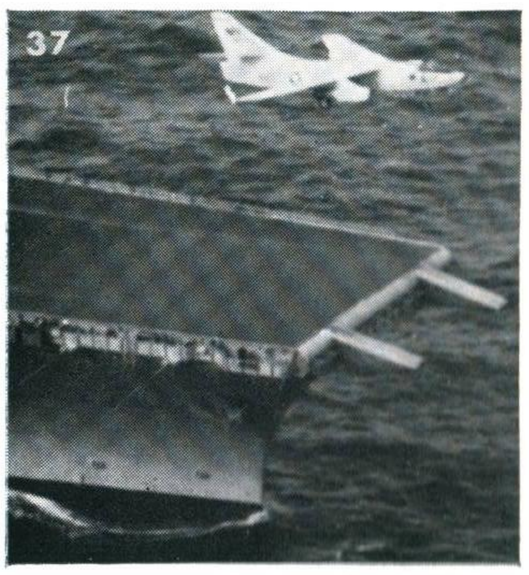

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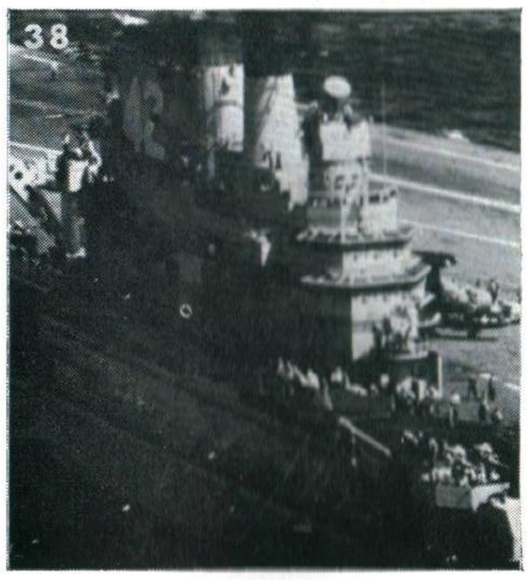

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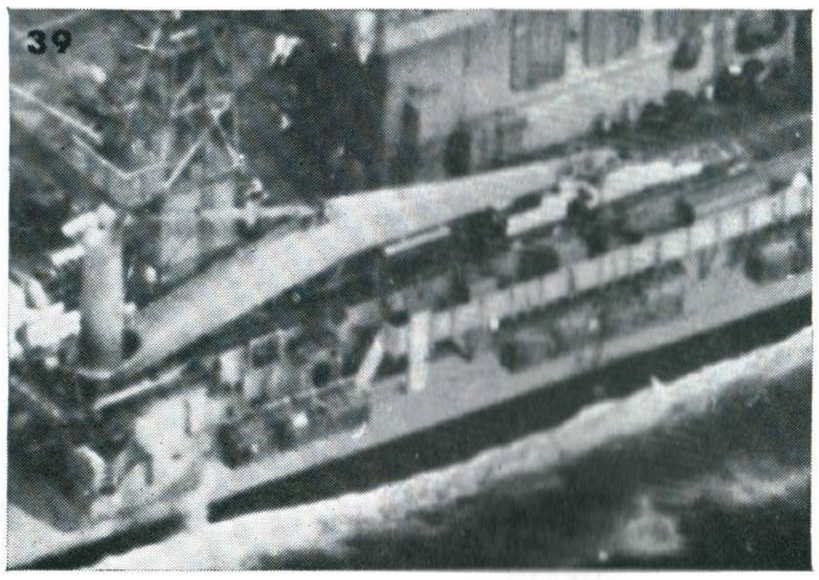

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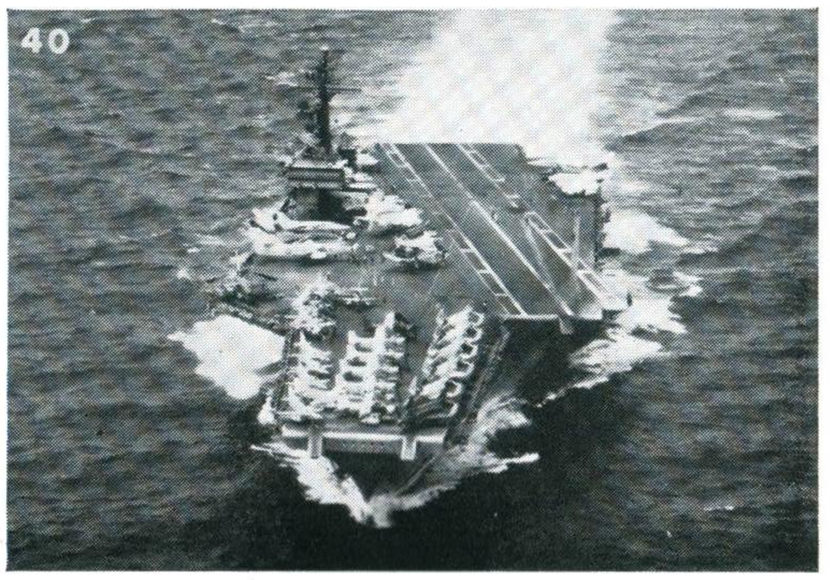

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KEY


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SHIP RECOGNITION

The Merchant Ship Initial Training System enables beginners to classify ships at the outset of training: at the same time providing a lead into the more difficult task of estimating ship sizes—particularly when seen from the air.

The system is based on the Reporting Code, devised by Lt. Cdr. E. C. Talbot-Booth, R.D., R.N.R., used during World War II; here it is used to force attention to features of ships.

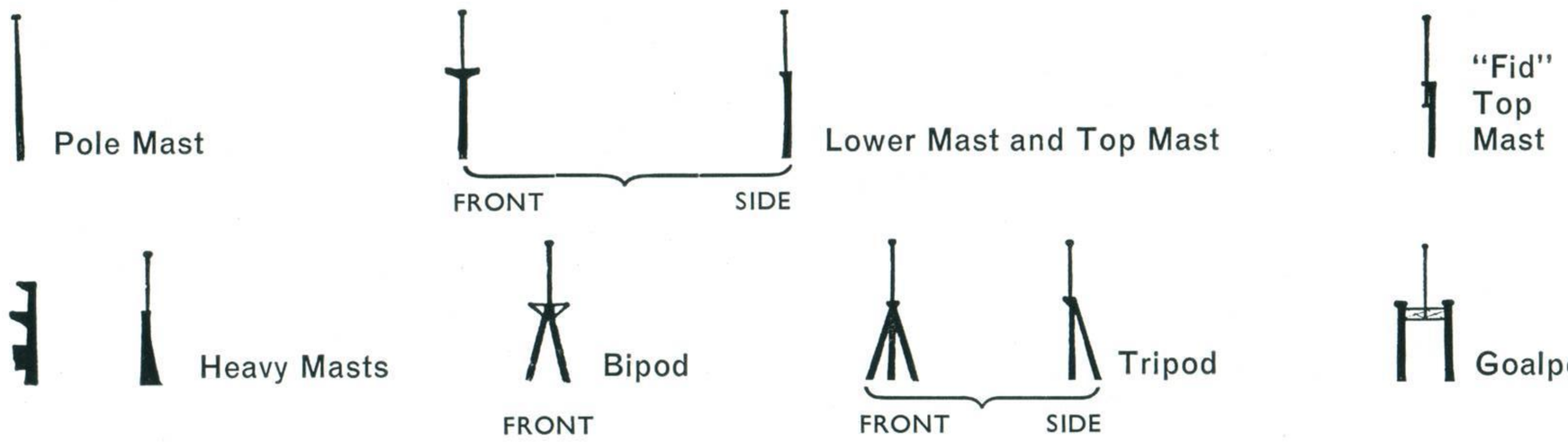
Reporting must be systematically and carefully carried out —as with recognition training procedure in other fields.

The procedure requires the student to report five features of a ship in a simple, standard descriptive form as follows:

SEQUENCE

(Kingposts (K), Masts (M), Deck Cranes (C) and Funnels (F), reading from stem to stern.)

TYPES OF MASTS To be reported simply by the letter M

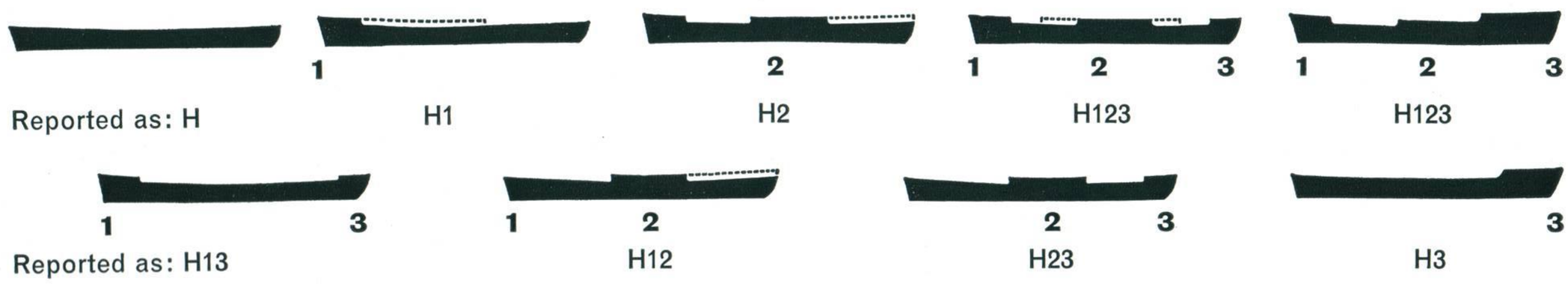


TYPES OF KINGPOSTS (Derricks stowed vertically). To be reported simply by the letter K



Note: Derricks can be stowed vertically, against the Kingpost (or Mast) as shown above, or parallel with the deck, or may be swinging. Kingposts abreast of masts or funnels are not coded. Cranes are reported as **C** if obvious, **K** if doubtful. Very tall radar poles are coded as **M**.

HULL FORMS

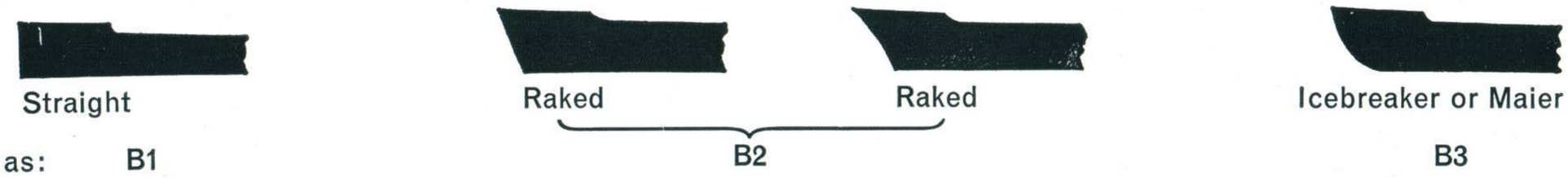


Hull forms need careful observing because superstructure may be built straight on to the upper deck and not on to an "island" or midcastle.

PROFILES



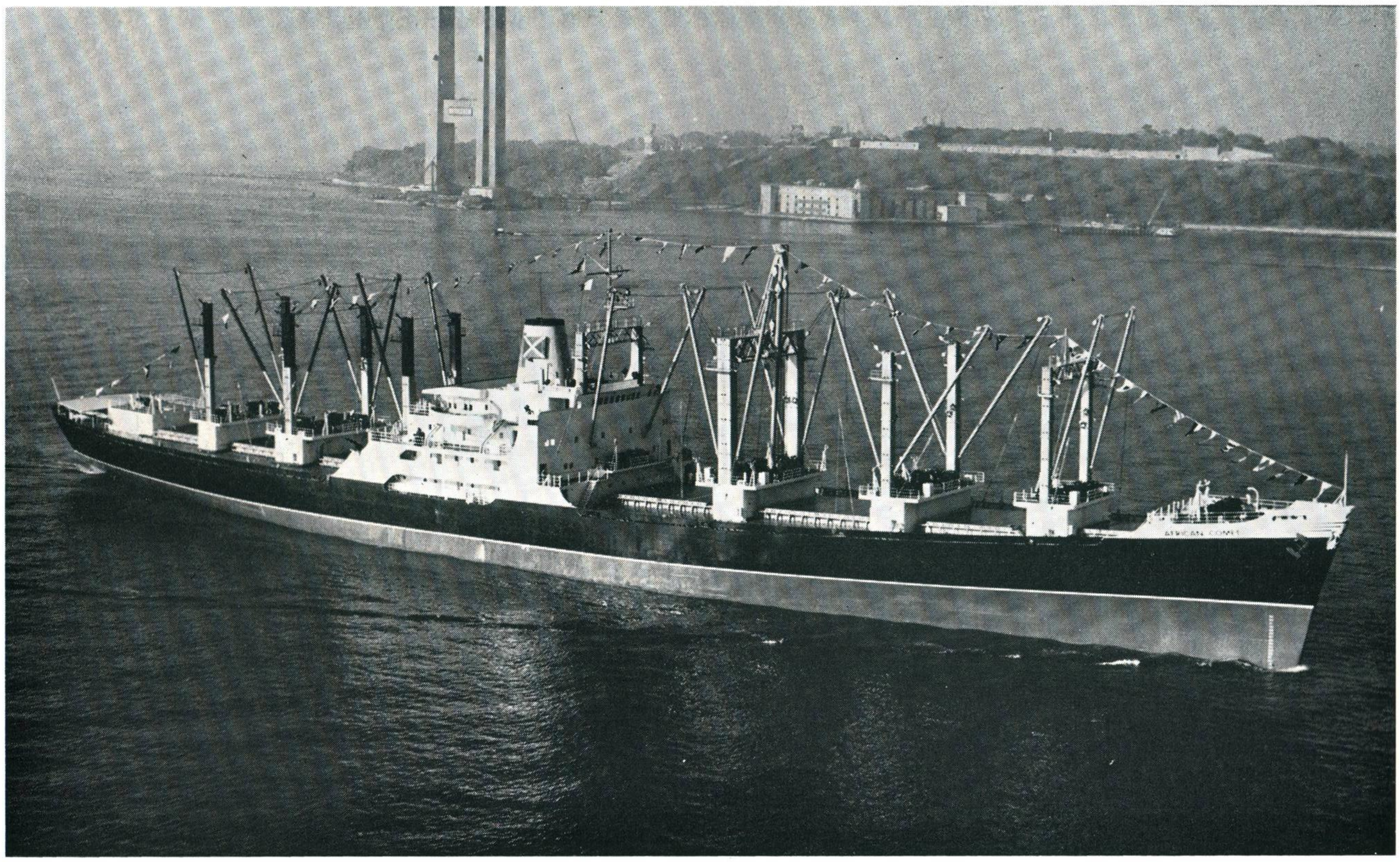
STEMS



STERNS



REPORTING CODE EXAMPLES



AFRICAN COMET 11,309 tons **KKKMFKKK H1**

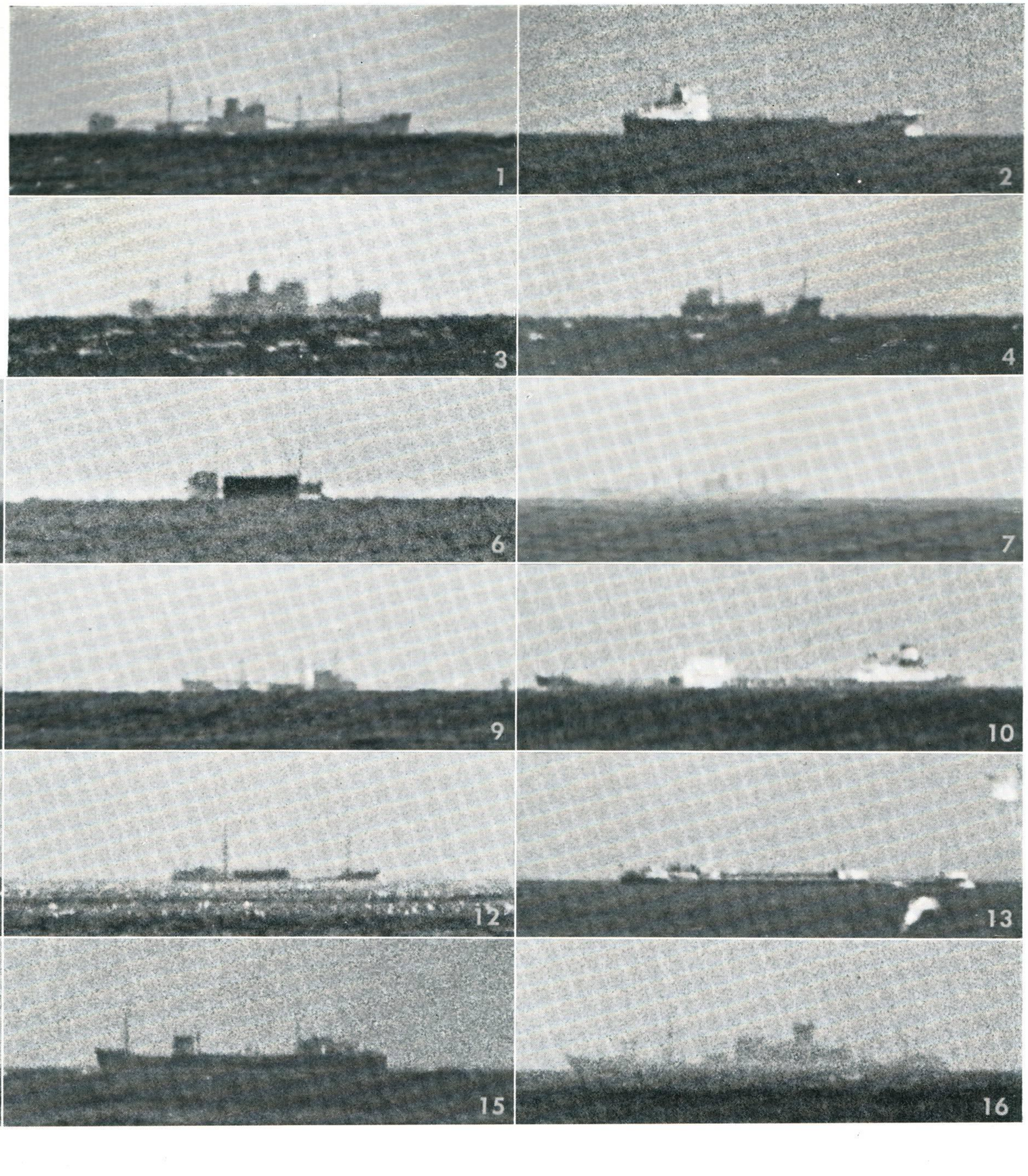


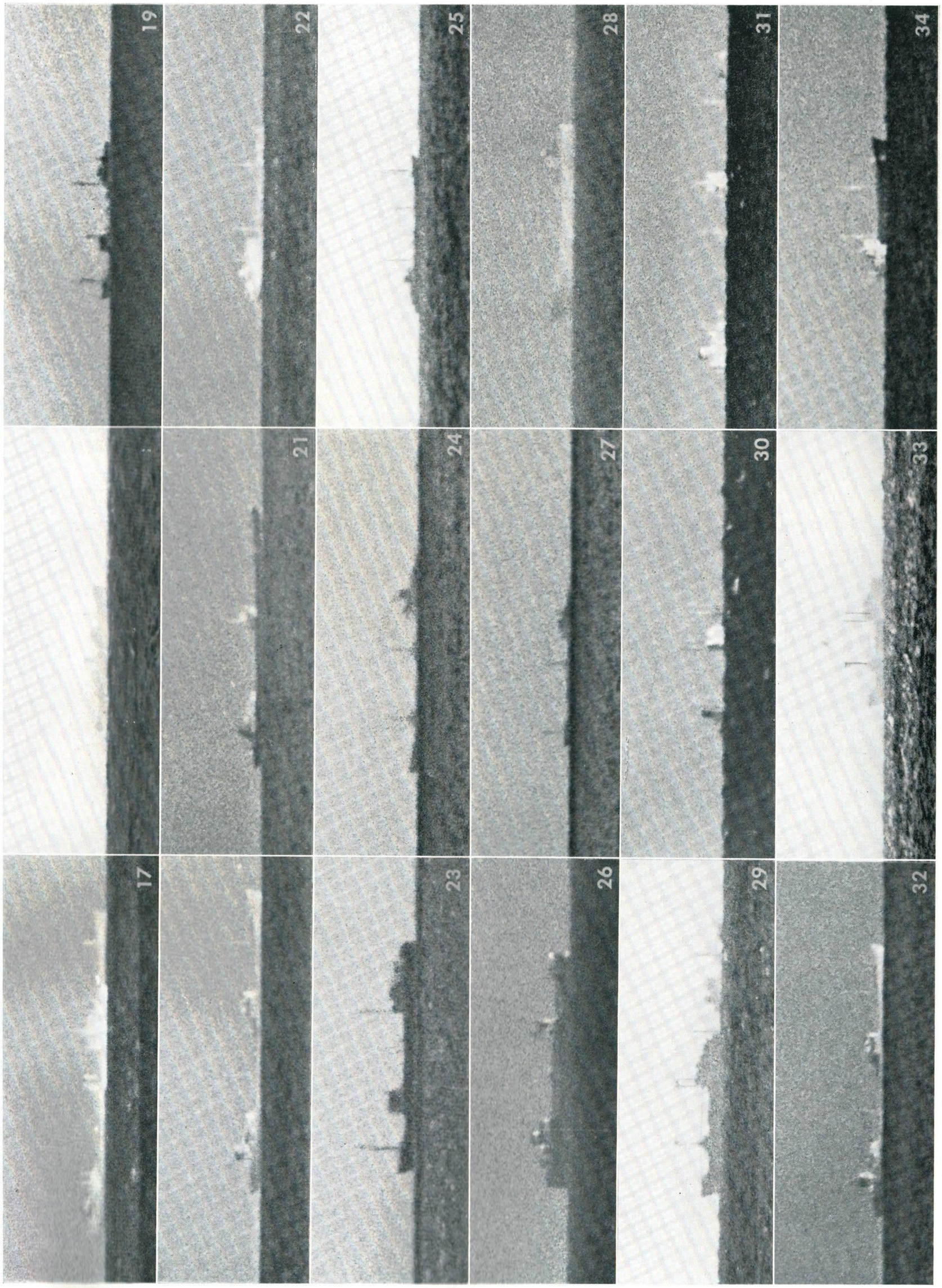
BUENOS AIRES 8,494 tons **MCCCMFCC H1**

continued overleaf

MERCHANT SHIPPING
—the low down

On the previous page is an explanation and worked out examples of a system of coding merchant ships where recognition of the individual vessel is not possible or necessary. Here are some views as a submariner might see them. Code them in the same way. Solutions on page 334.



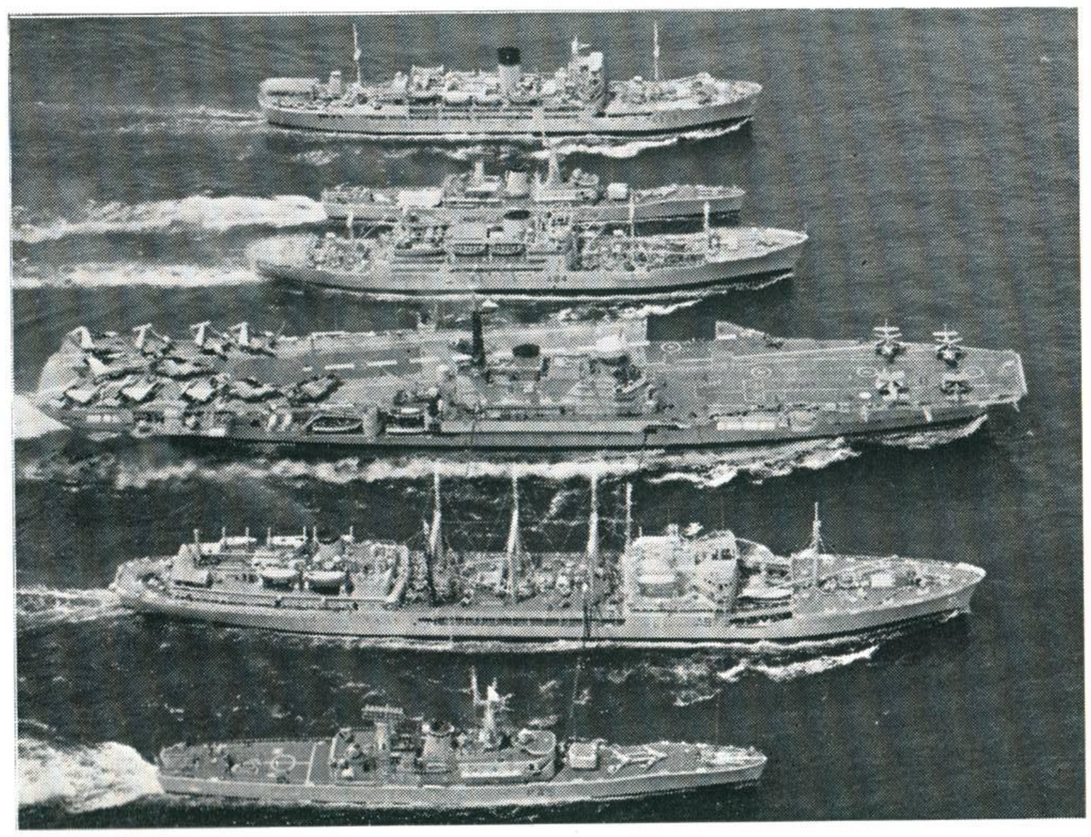

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TEST PAPER

FIAT G91?



Solutions on this page



Cover Photo: Six-Ship Replenishment off Hong Kong. **HMS Hermes** and **Minerva** (lower) being refuelled by **Tideflow**, steaming between them. Carrier is simultaneously receiving supplies from **Reliant**. **HMS Galatea** is receiving stores from **RFA Retainer**.

Page 310

TEST PAPERS

BADGER: Joker is second line 4th picture.
TWIN OTTER: Joker is first line 2nd picture.
TRANSALL: Jokers are first line 4th picture and third line 4th picture.

Page 334

FIAT G 91: Joker is third line 2nd picture.

Page 312

PT-76

All targets are of **PT-76** except Nos. 26 and 38 which are jokers.

Page 318

HERCULES

All targets are **Hercules** except No. 5 **Transall**, No. 8 **Cargomaster**, No. 27 **Cargomaster** and No. 35 **Transall**

Page 322

F-111

All targets are of **F-111** except as follows: No. 11 **Flipper**, No. 23 **Fiddler** and No. 31 **Draken**.

SOLUTIONS TO TESTS AND EXERCISES

Page 326

U.S.S. KITTY HAWK

All targets are of U.S.S. **KITTY HAWK** except Nos. 5, 20, 29, 38, which are U.S.S. **Franklin D. Roosevelt.**

Page 332

MERCHANT SHIPPING—the low down

THE LOW DOWN

No.	Type	Sequence	Hull	Profile	Class
1	Cargo	MKFKM	H1	P2	
2	Coaster	MMF	H12	P4	
3	Cargo Passenger	KMFKMK		P2	
4	Coaster	MMF	H12	P4	
5	Tanker	KMFK		P3	"Royal Sovereign" Light Vessel in front. 3rd ship hull down
6	Coaster	MMF	H13		With large deck cargo
7	Cargo	KKMFKM	H13	P2	Possibly Japanese
8	Bulk Carrier or Tanker	KKMFK	H13	P4	
9	Coaster	MKFM	H12	P4	
10	Tanker		H123	P3	
11	Cargo	MFM		P2	
12	Coaster	MM	H13	P4	With deck cargo or boat
13	Flat Iron Collier	MM	H12	P4	
14	Stern Trawler	MMFK	H	P2	
15	Coaster	MKMF	H12	P3	
16	Cargo	KMKFKK	H123		"Argentina Star" Class
17	Tanker	KMKKF	H123	P3	
18	Standard Cargo	MKFM	H1	P1	
19	Coaster	MKMF	H123	P3	
20	Tanker	MKMF	H123	P3	
21	Tanker	KMFK	H123	P3	
22	Cargo	MMF	H13	P4	
23	Coaster	MKMF	H12	P3	
24	Cargo	MMF	H13	P4	
25	Cargo	KKMF		P4	
26	Coaster	MMF	H123	P3	
27	Cargo	MMFK		P4	
28	Tanker	MMKF		P3	
29	Coaster	MMF	H13	P4	(No. 11 in background)
30	Coaster	MMMF		P3	
31	Tanker	KMKKF		P3	
32	Tanker	MMF	H123		
33	Coaster	MMF	H13	P4	
34	Coaster	MMF		P4	With deck cargo

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29–56	FEBRUARY	113–140	MAY	197–224	AUGUST	281–308	NOVEMBER
57–84	MARCH	141–168	JUNE	225–252	SEPTEMBER	309–336	DECEMBER

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