L/11071. A/C. 2. LAW. J.H.

66, LINDEN ROAD.
ASHFORD, KENT.

181 1071

THE MORSE CODE.

A	·−	J	·−−−	R	·−·	1	·−−−−
B	−···	K	−·−	S	···	2	··−−−
C	−·−·	L	·−··	T	−	3	···−−
D	−··	M	−−	U	··−	4	····−
E	·	N	−·	V	···−	5	·····
F	··−·	O	−−−	W	·−−	6	−····
G	−−·	P	·−−·	X	−··−	7	−−···
H	····	Q	−−·−	Y	−·−−	8	−−−··
I	··			Z	−−··	9	−−−−·
						0	−−−−−

Zero

A ·− N −· B −··· V ···− D −·· U ··− F ··−· L ·−··

E · I ·· T − M −− S ··· O −−− H ····

DU hyphen

A - able.
B - Baker
C - Charlie
D - Dog.
E - Easy
F - Fix
G - George
H - How.
I - Item
J - Jig

K - King
L - Lion
M - Monkey.
N - Nan.
O - Oboe
P - Peter
Q - Queen
R - Roger
S - Sugar
T - Tare

U - Uncle
V - Vor
W - William
X - X-Ray
Y - Yorker
Z - Zebra.

Administration. 3/11/42.

R.A.F. started about 1897 as a Balloon school at Chatham for R.E's. - for obtaining information about enemy from air. Removed to Farnborough - built factory for making balloons & equipment. - Renamed the Air Battalion - R.E.'s. - 14 officers & 176 other ranks. Following year divided into Aeronautical Service for Military & Naval Services. - renamed R.F.C. 1914 - Naval section renamed R.N.A.S. - to 1918 R.F.C under War Office & R.N.A.S. under Admiralty. 1917. Air Force Constitution Act - provided for air council - in 1918. R.A.F. of today formed & governed by council.

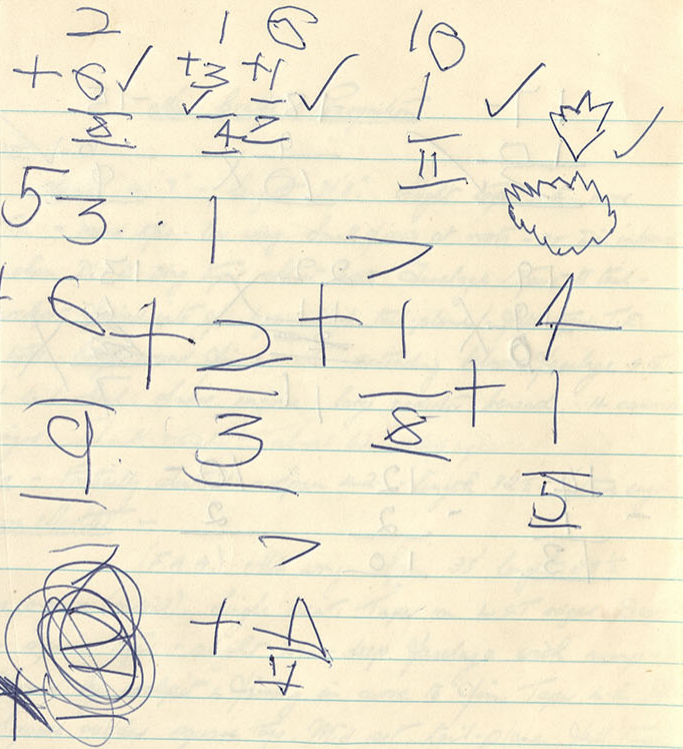
Organisation of R.A.F. - R.A.F. consists of R.A.F. itself - R.A.F reserve - Air Force Officers - Special Reserve - the R.A.F.V.R & the A.A.F. (Women's section = W.A.A.F.). The 2 are controlled by Air Force Act in wartime. Air council is body of people - Secretary of State for Air & under him are High Officers of R.A.F. & certain civilians from Parliament. 1940 - Act passed (April)

∴ Secretary of State for Air - President - (Sinclair.
Parliamentary Under Sec. of State for Air. (Balfour
Chief of Air Staff - (appointed by King).
Then 3 members of Air Force:—

1. Air Member for Personnel.
2. Air Member for Supply & Organisation.
3. Air Member for Training. & Permanent under Sec. of State for Air.

Air Ministry is Civil Service Branch (Clerical Organisation).

Commands - Home Command - Bomber & Fighter, Coastal, Balloon, Flying Training, Technical Training, Maintenance, Army Cooperation (Ferry Command not yet like others) & Northern Ireland Command.



17- 10 ✓ 9

-18 9 X 10

-15 6 ✓ 9

-19 19 X 0

-22 11 X 2 11

-13 6 X 6 7

14 - 1 = 13

12 - 2 = 10

10 - 2 =

Air-Craft Recognition.

Typhoon

Span 41'7" - length 31'8". Slight taper L.E., more taper T.E. - round tips - low wing. Small fillets at roots - no Di. inboard section - then Di. to wing tips. Short nose. Fuselage tapers to tail - small cockpit faired into fuselage - High tail-plane - full taper T.E. - round tips - large round fin & rudder - extending below fuselage & to retracted tail-wheel. Sabre engine - large radiator beneath. 4 cannon in wings. Short nose - about 1/3 radial type

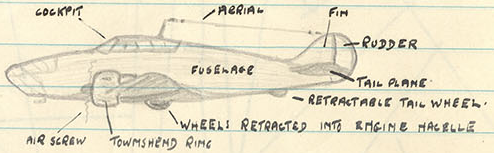
Tornado - Pratically identical. - Span 42' - length 32½' - Vulture engine

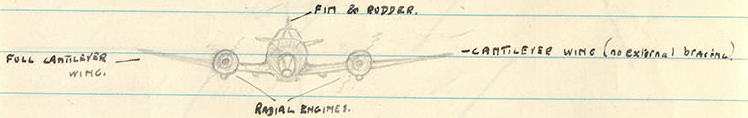
Grumman Mallet -

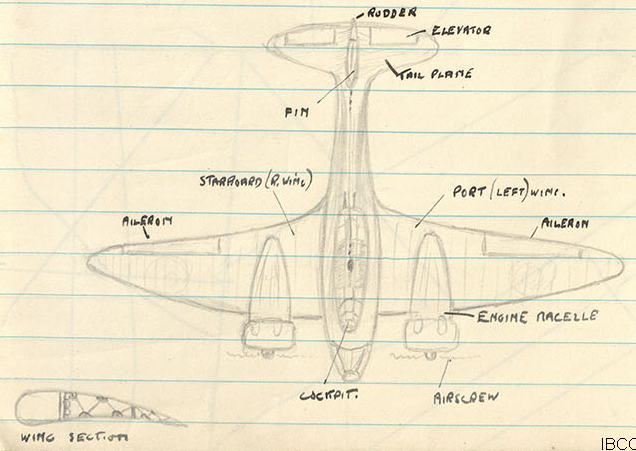
(F.A.A.) Mid wing. Span 38' length 28½' Cyclone engine (radial). Single seat. Taper on L & T edges. Deep chord - square tips - slight Di. - deep fuselage with hump-back formed by cockpit & fairing in curve to fin. Taper L.E. of fin. Square rudder, square top. Mid set tail-plane. full taper L.E. Cut out in T.E. - square tips. 2. ehts ducts under wings. 1200 H.P. Wright Cyclone - top speed 325 m.p.h - range 1150 miles & ceiling 28,000'. - 4 machine guns in wings.

Baltimore.

Advanced addition of Maryland. Twin engine American Bomber - 2 double radial (Cyclone) engines - wings mid-set - slight Di. Short roots. Tail tapers L. & T. edges to round tips. T.E. Broken by engine nacelles. - Engine mid-set - Fuselage long & narrow - tapers sharply near tail. Beneath gun-emplacement ~~adm~~ amidships - nose long & glazed. - Step-up cockpit along to gun position then straight to tail tapered Fin & round rudder. Tail plane set high & oval. Span 61'4" Length 48½'.







Navigation.

Compass. A.S.I. & Altimetre

Map Reading - Main Types of Map.

1. Plotting Maps. - for laying off your flight route. - very few features - Code letter G.S.G.S. 4080.

2. Topographic. - for map-reading :. containing varying information according to scale.

Scales:- (a) One $\frac{1}{4}$" to mile (code A). = $\frac{1}{253440}$

(b). $\frac{1}{500,000}$ or 1:500,000. - 1" on map = 500,000" on ground. (approx 7.89 miles) - (code letter. = K.A (for Gt. Britain).

(c). = $\frac{1}{500,000}$ for enemy & occupied territory (A.F.) = 7.89 miles

(d). $\frac{1}{250,000}$ - 1" to nearly 4 miles (A.B.). (3.945 miles

The Ideal Map.

Is one which gives the minimum required for particular flight. - Large scale for small target & vici-versa. small scale for long flight. Ideal map for bombs = $\frac{1}{500,000}$. Large scale maps - too much room

Map Signs - The Conventional Signs.

1. Pictorial Signs - canals. Rlwys. rivers - woods.

Symbols - (a) Air obstructions e.g. Pylons & balloon barrages - power lines

(b) Different symbols for diff. kinds of aerodromes.

(c). Relief (Heights of ground) - Layer tinting.

Not important :- 1. Radio Symbols (beacons)

2. Light - marine & aero - (continually being altered)

Shape of high ground usually indicated by brown contour lines & usually tinted between lines.

Relief or Height.

1. Layer tinting. (colour becomes deeper).

2. Contour lines.

3. Hachures - height on plotting maps. - Spot height - dot indicates highest point in certain area. (with metres or ft. indicated). N.B. always make sure if given in metres or feet.

The Value of different Features.

1. Coast Line.

2. Water features i.e. Rivers, Estuaries, canals, lakes, & big reservoirs.

3. Hills & Mountains.

4. Built up areas (Cities & Towns).

5. Railways (not very helpful) whilst distinctive,

6. Roads. (not very important)

7. Woods (if small practically useless).

8. Forests - (probably too big).

Very Important to learn to judge direction & distance.

29/1/42

Projection.

The projection of a map is the particular form chosen of representing the earth's spherical shape on a flat sheet of paper. The Mercators projection is used for the plotting map. On it meridians & parallels of latitude appear as parallel straight lines.

Vertical Interval

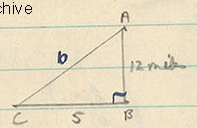
- The difference in level between successive contours varies according to the scale of the map. This difference in level between successive contours is called its vertical interval. C.V.

31 Days **MARCH,** ~~1939~~ 1944 67

8 WEDNESDAY (67-298)

Very cold wind Sunny.
A fine morning after a quiet night
John still home. Siren sounded
9.30AM all clear 9.45AM, not a
bump or plane heard.

4. (a)

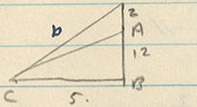


$b^2 = AB^2 + CB^2 = b^2 = 12^2 + 5^2$

$b^2 = 144 + 25 \therefore b^2 = 169$

$\therefore b = \sqrt{169} = 13 \text{ miles.}$

(b).



$b^2 = DB^2 + CB^2 = 14^2 + 5^2$

$b^2 = 196 + 25 = b^2 = 221$

$\therefore b = \sqrt{221}.$

14
14
56
14
196

$= 1\overline{)221}$ 14·8

121

248 96

288 2500

2304

196

$=$ b (or CD) $= 14 \cdot 8$ miles.

3. 7. 2. 6.

27 more 3/6 than 1/=

Advanced.

1. $3x^2 + 8x = 3 = 0.$

3\. b. 197.752.

c. $\frac{8}{17}$ = 17)8.000000(0.47058
68
120
119
100
85
150
136
14

Answer = 0.471 Correct to 3 places

Sec. II. 1. 8 gals = $\frac{1}{5}$ of $\frac{2}{3}$ = $\frac{2}{15}$ ∴ $\frac{15}{15}$ = $\frac{8}{1} \times \frac{15}{2}$ = 60 gals.

2\. 1760 yds = 1609.52 metres.
∴ 1 yds = 1760)1609.52(0.9145
15840
2552
1760
7920
7040
8800
8800

Answer. 1 yds = 0.9145 metres.

3\.
432
618
876
9)1926(214 m.P.H.
18
12
9
36

Intermediate

1\. (a) $\frac{2x-1}{5} - \frac{3x+1}{2} = \frac{2}{5}$. (× by 10).

$4x - 2 - 15x + 5 = 4$

$4x - 15x = 2 - 5 + 4$

$-11x = 1$ ∴ $x = -\frac{1}{11}$

(b). 1. $\frac{5a-b}{a^2+b^2} = \frac{10-3}{4+9} = \frac{7}{13}$

2\. $\frac{2b-c}{10^2+a^2} = \frac{6-5}{100+4} = \frac{1}{96}$.

3\. $\frac{4a-b+2c}{5a} = \frac{8-3+10}{10} = \frac{15}{10} = 1\frac{1}{2}$.

2\. 360 m.p.h. 1 inch = 2.54 cms or 0.0254 metres.

360 miles in 3600 secs.
1 " " 10 "
1760 yds " 10 "
5280 ft " 10 "
528 " 1 sec. = 6336 inches in 1 second.

528
12
1056
528
6336

= 0.0254 × 6336.

= 0.0254 ×
6336
0.1524
0.762
07.62
152.4
160.9344 metres per second.

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Mathematics — Elementary

Section ha) 27386
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b. 10832
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10270

c. 278
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1390
556
278
34750

d. 92) 4873 (52·9673
460
273
184
890
828
620
552
680
644
360
276
84

2. a. $\frac{1}{2} + \frac{2}{3} - \frac{3}{4} + \frac{1}{6} = \frac{6+8-9+2}{12} = \frac{7}{12}$.

b. $\frac{1}{2} + \frac{2}{3} \times \frac{3}{4} + \frac{1}{6} = \frac{1}{2} + \frac{2}{3}^{1} \times \frac{3}{4}_{2}^{1} + \frac{1}{6} = \frac{1}{2} + \frac{1}{2} + \frac{1}{6} = 1\frac{1}{6}$.

c. $\left(\frac{1}{2} + \frac{2}{3}\right) \times \frac{3}{4} + \frac{1}{6} =$

$\left(\frac{3+4}{6}\right) \times \frac{3}{4} + \frac{1}{6} = \frac{7}{6}_{2}^{1} \times \frac{3}{4}^{1} = \frac{7}{8} + \frac{1}{6} = \frac{21+4}{24} = \frac{25}{24} = 1\frac{1}{24}$

3. a. 287.3 × .483

= 2873
483
8619
22984
11492
= 138.7659
138765 9