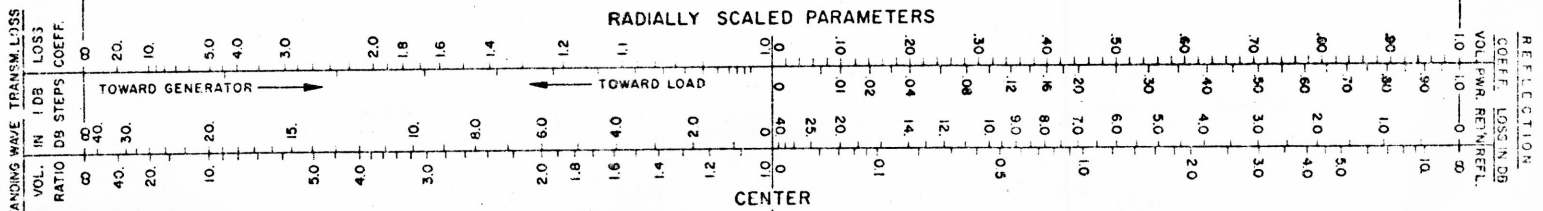
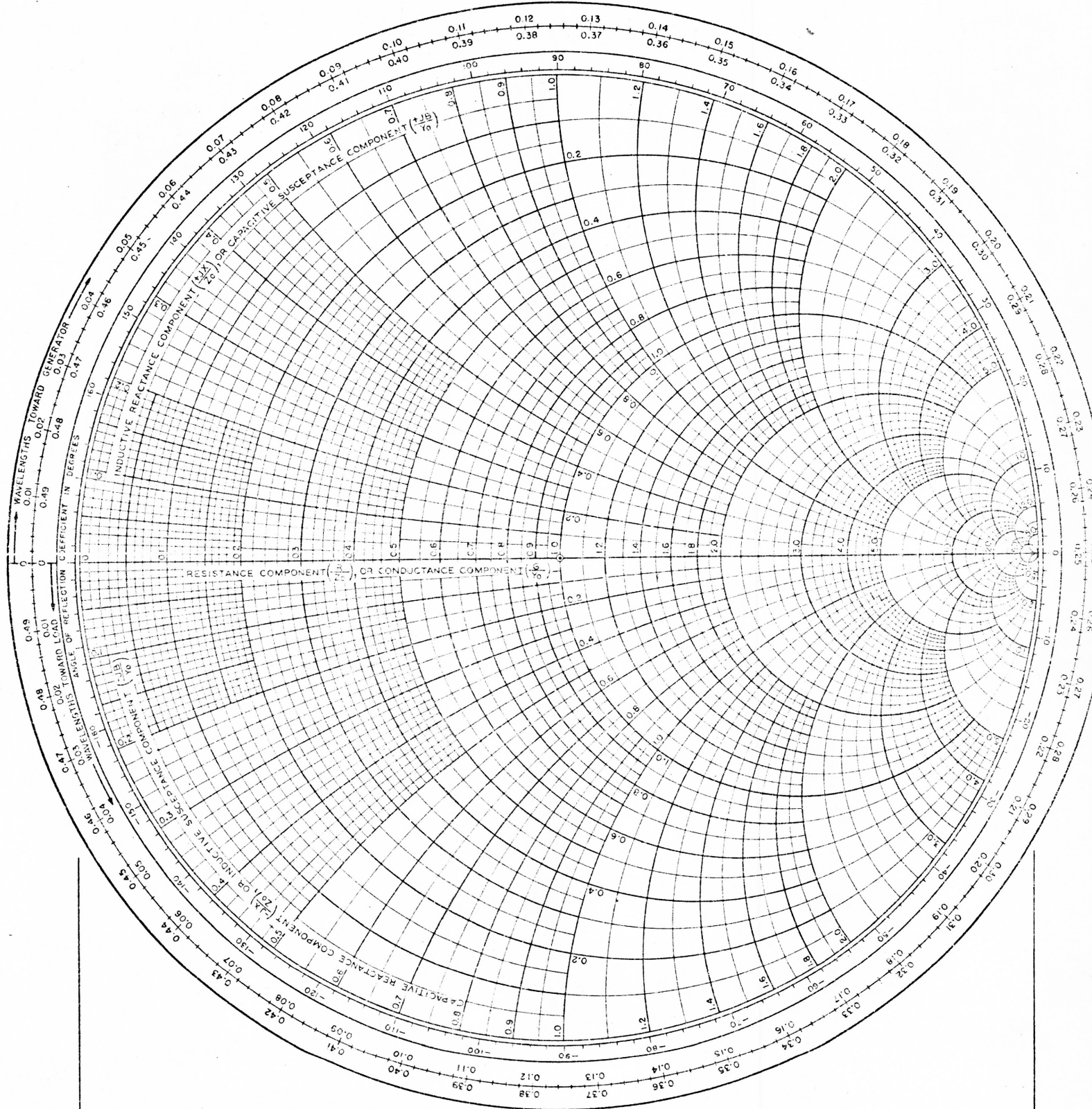


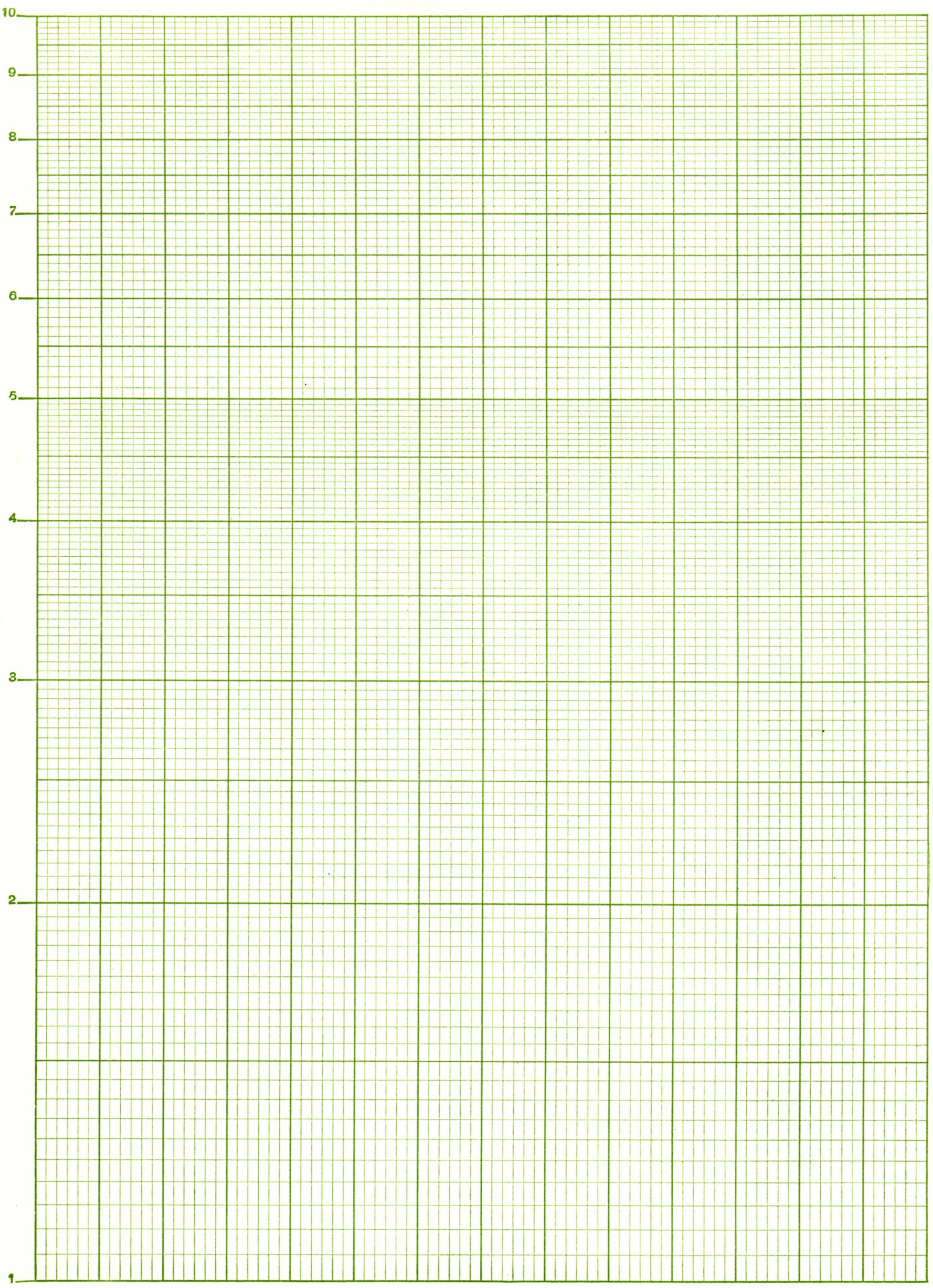
NAME	TITLE	DWG. NO.
SMITH CHART Form 5301-7560-N	GENERAL RADIO COMPANY, WEST CONCORD, MASSACHUSETTS	DATE

IMPEDANCE OR ADMITTANCE COORDINATES

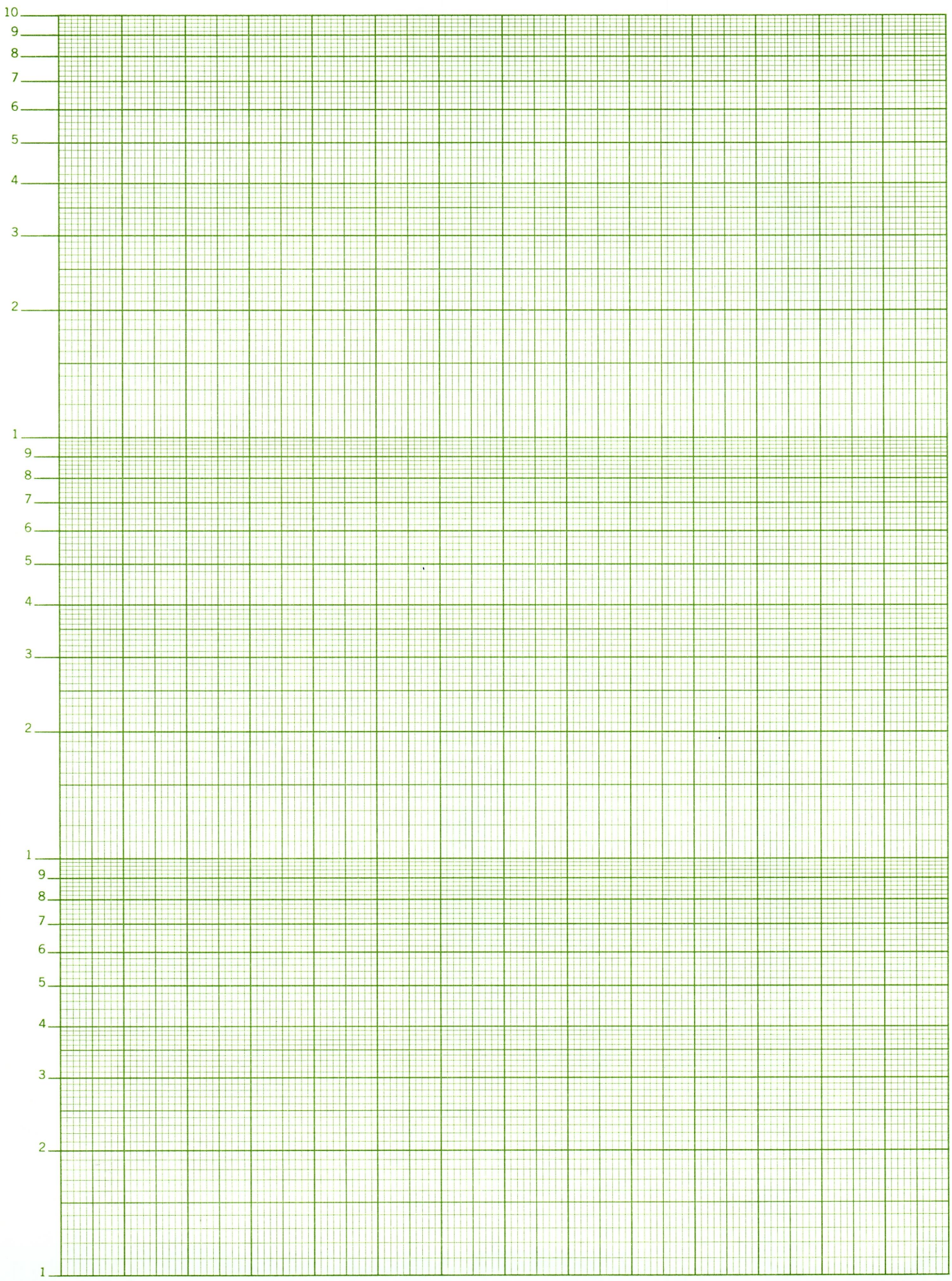




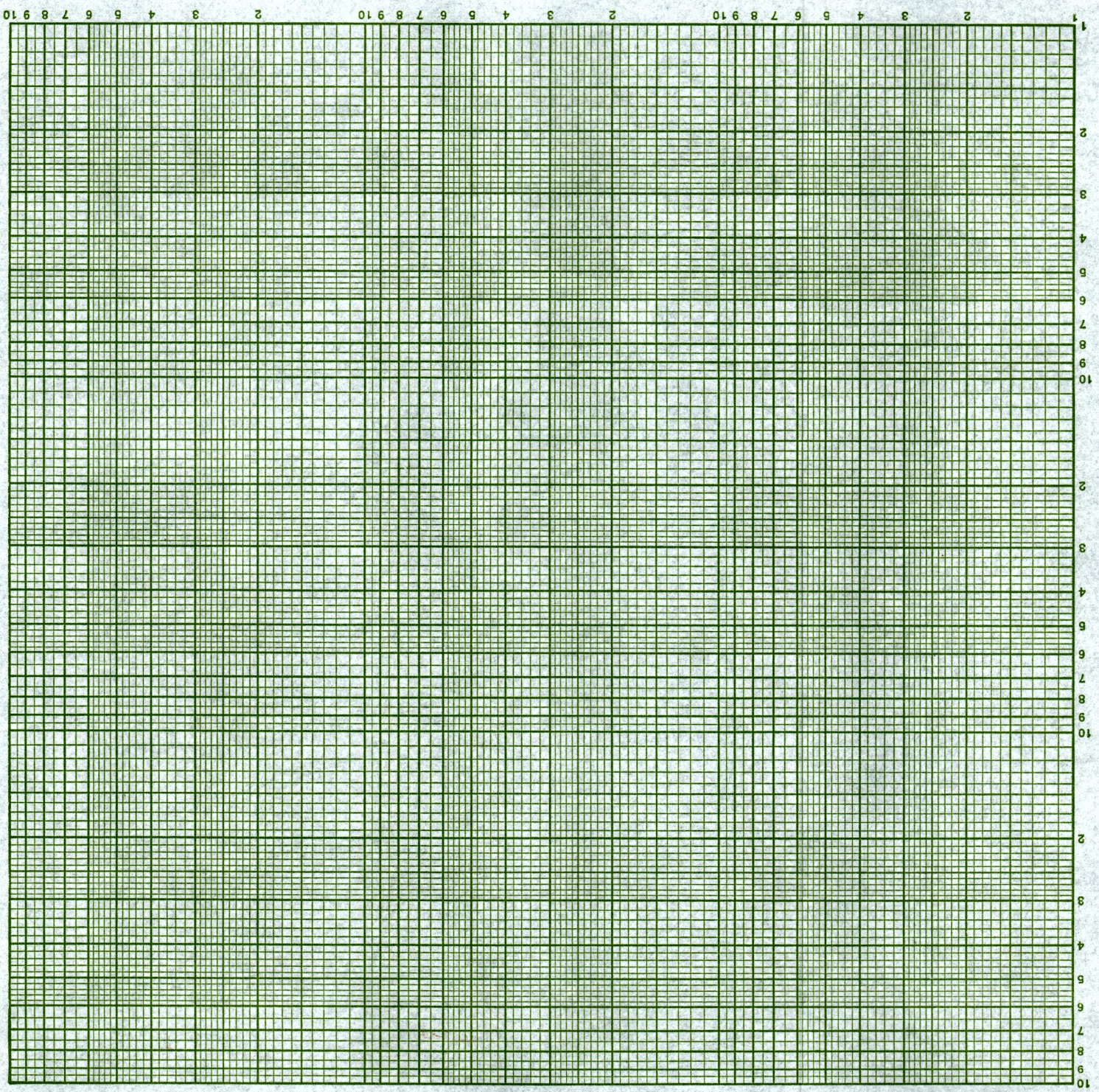
SEMI-LOGARITHMIC 46 4770
1 CYCLE X 84 DIVISIONS MADE IN U. S. A.
KEUFFEL & ESSER CO.



 **46 5810**
SEMI-LOGARITHMIC
3 CYCLES X 140 DIVISIONS
MADE IN U. S. A. •
KEUFFEL & ESSER CO.



K+M LOGARITHMIC 46 7402
3 X 3 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

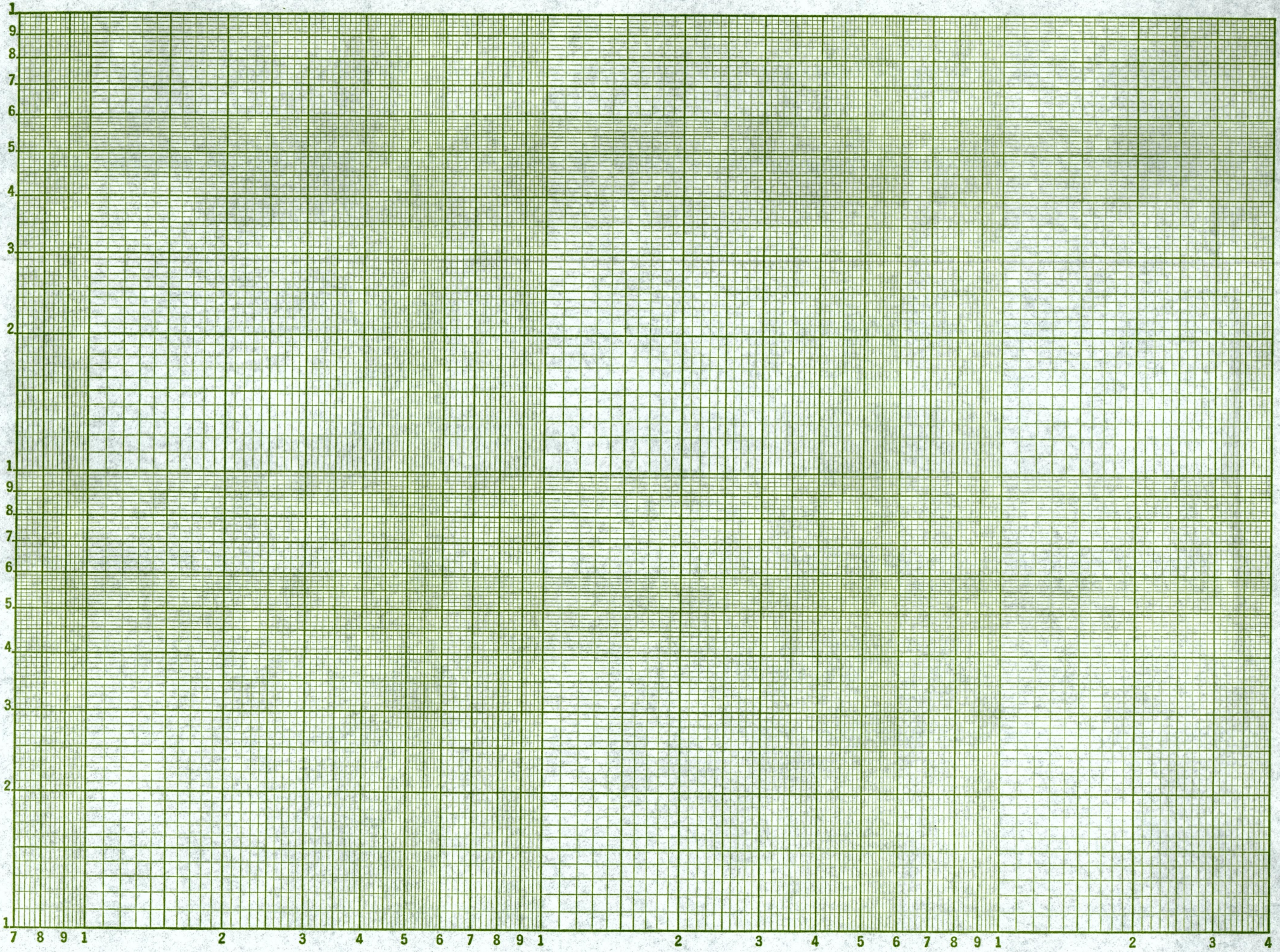




LOGARITHMIC
2 X 2.7 CYCLES

46 7282
MADE IN U. S. A.

KEUFFEL & ESSER CO.

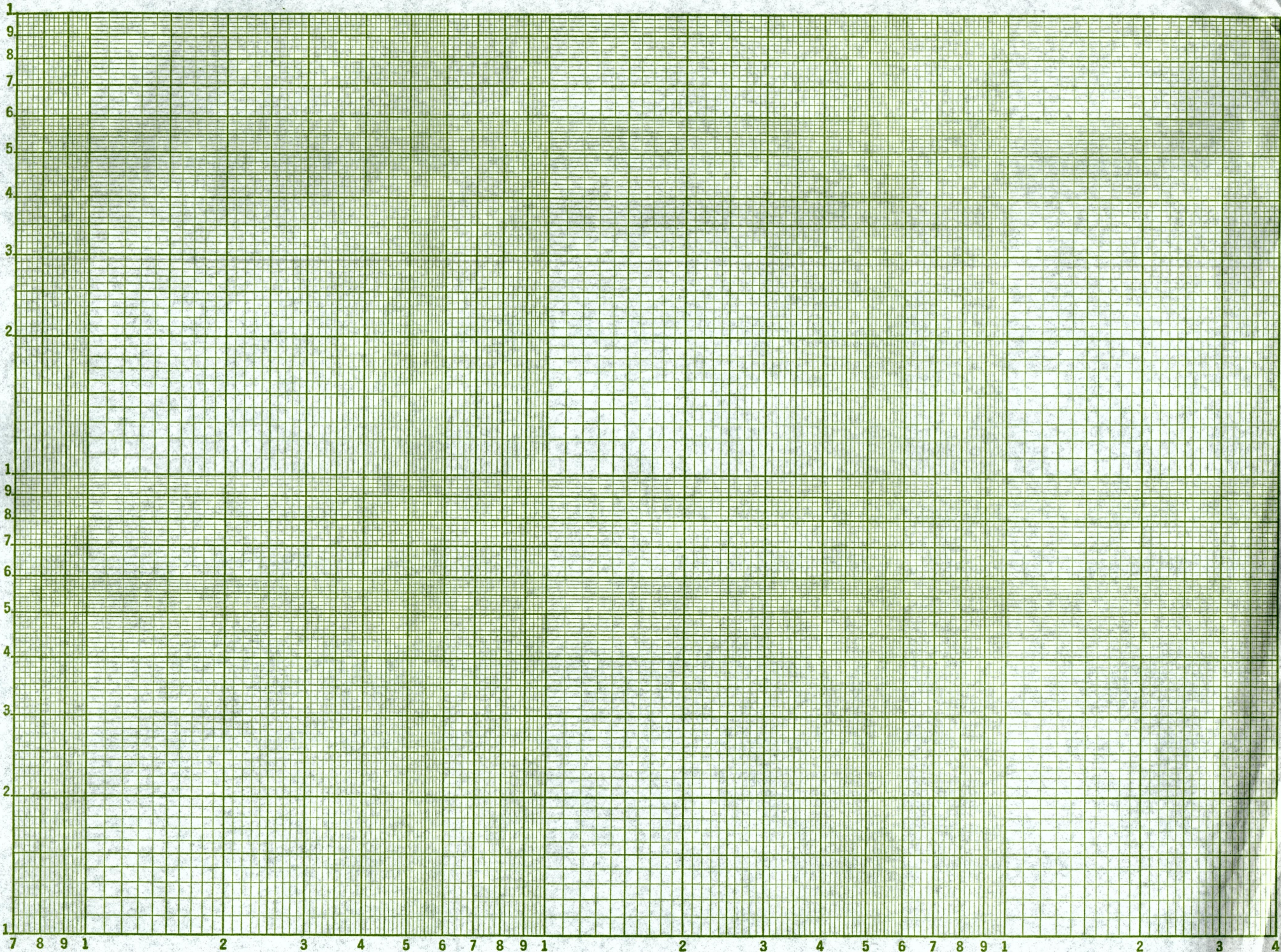


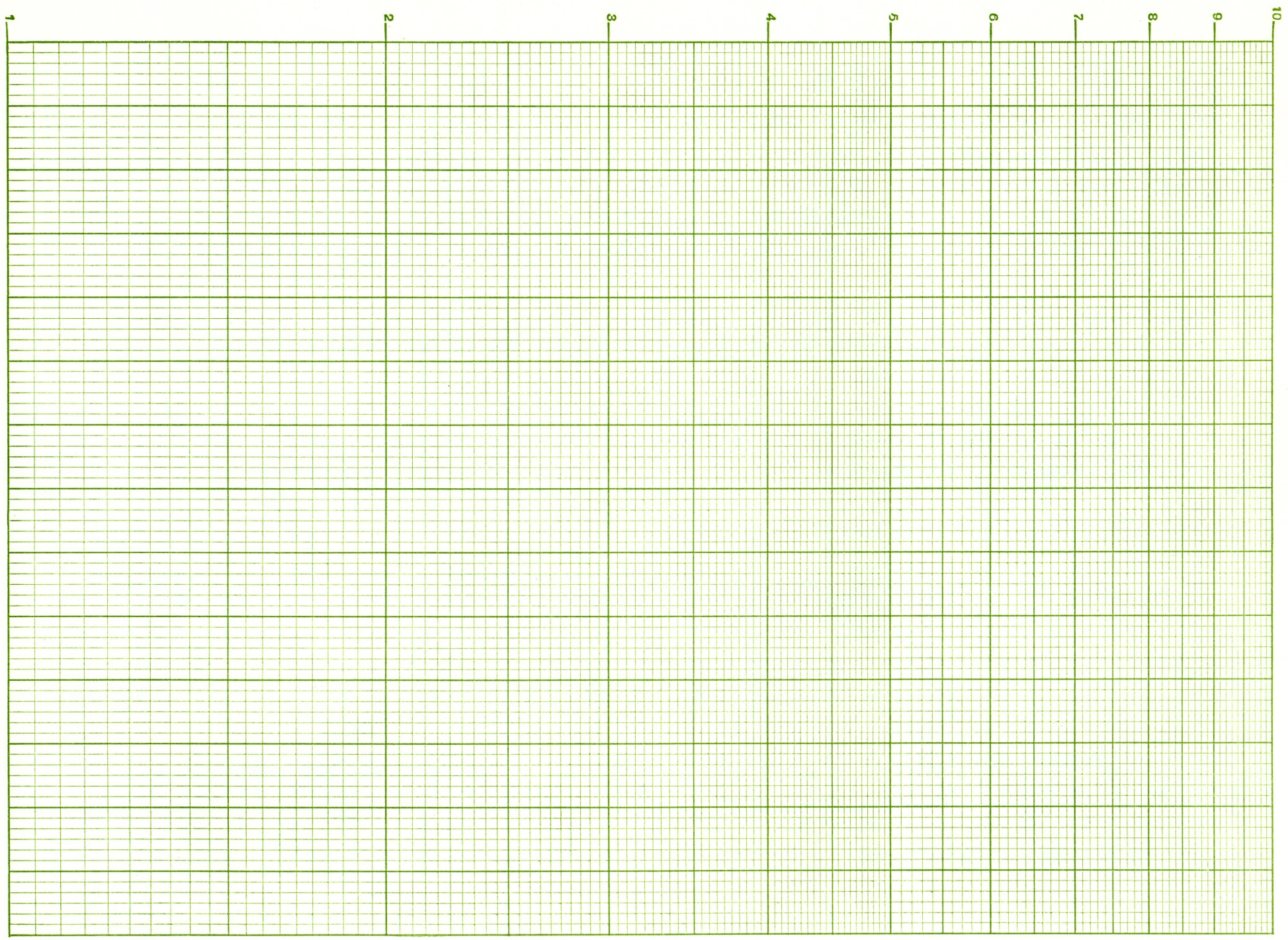


LOGARITHMIC
2 X 2.7 CYCLES

46 7282
MADE IN U. S. A.

KEUFFEL & ESSER CO.

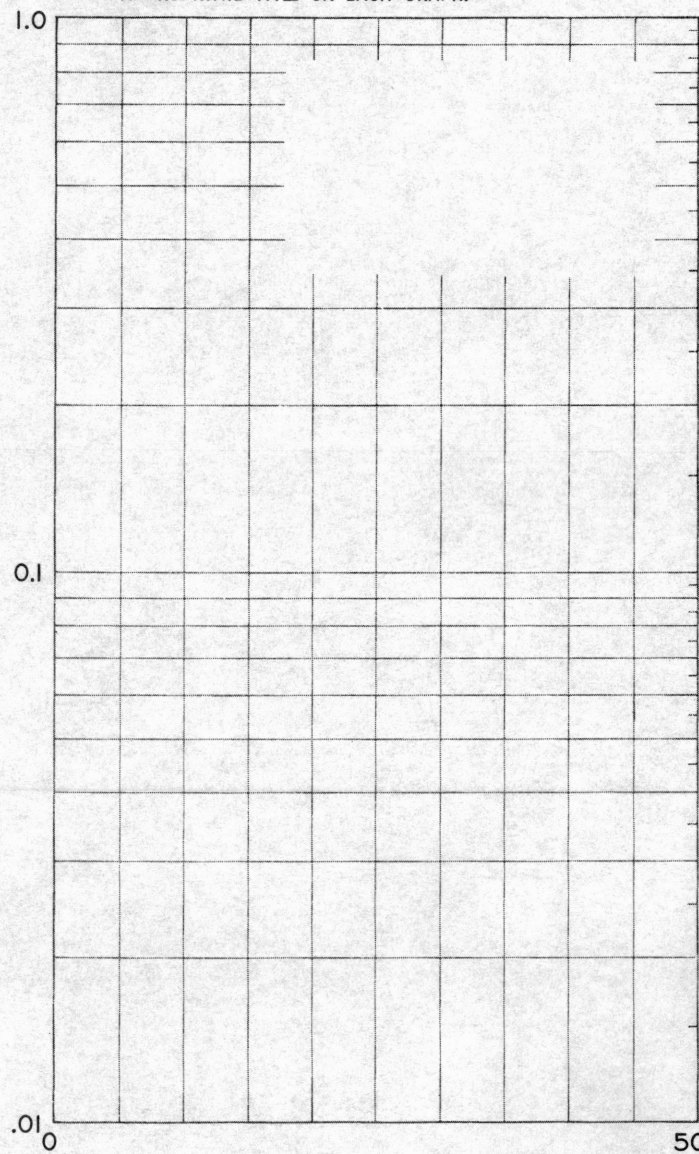
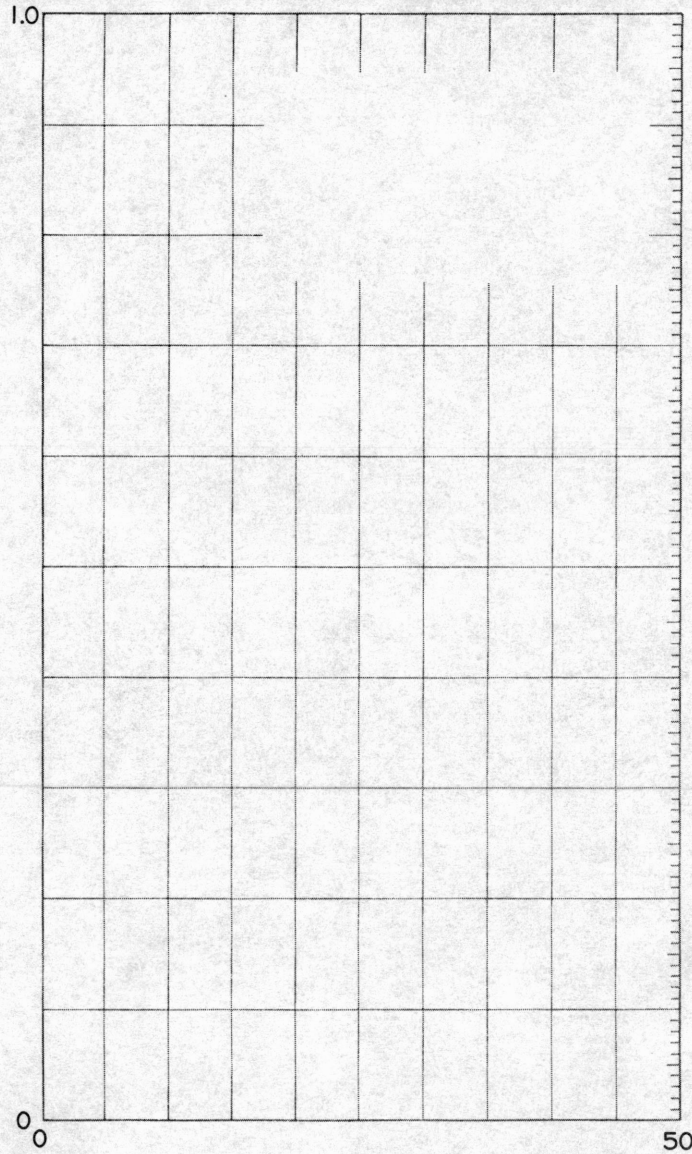




SEMILOGARITHMIC GRAPH

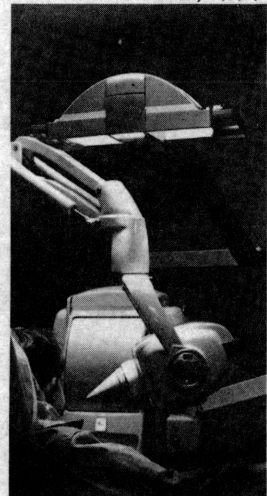
THE INTENSITY, I_x OF AN X-RAY BEAM AFTER PASSING THROUGH x CENTIMETERS OF HUMAN TISSUE IS GIVEN APPROXIMATELY BY THE FORMULA $I_x/I_0 = e^{-0.1x}$, WHERE I_0 IS THE BEAM SOURCE INTENSITY. A TABLE OF VALUES FOR INTENSITY RATIOS AS A FUNCTION OF BEAM DISTANCE TRAVELED IS GIVEN BELOW.

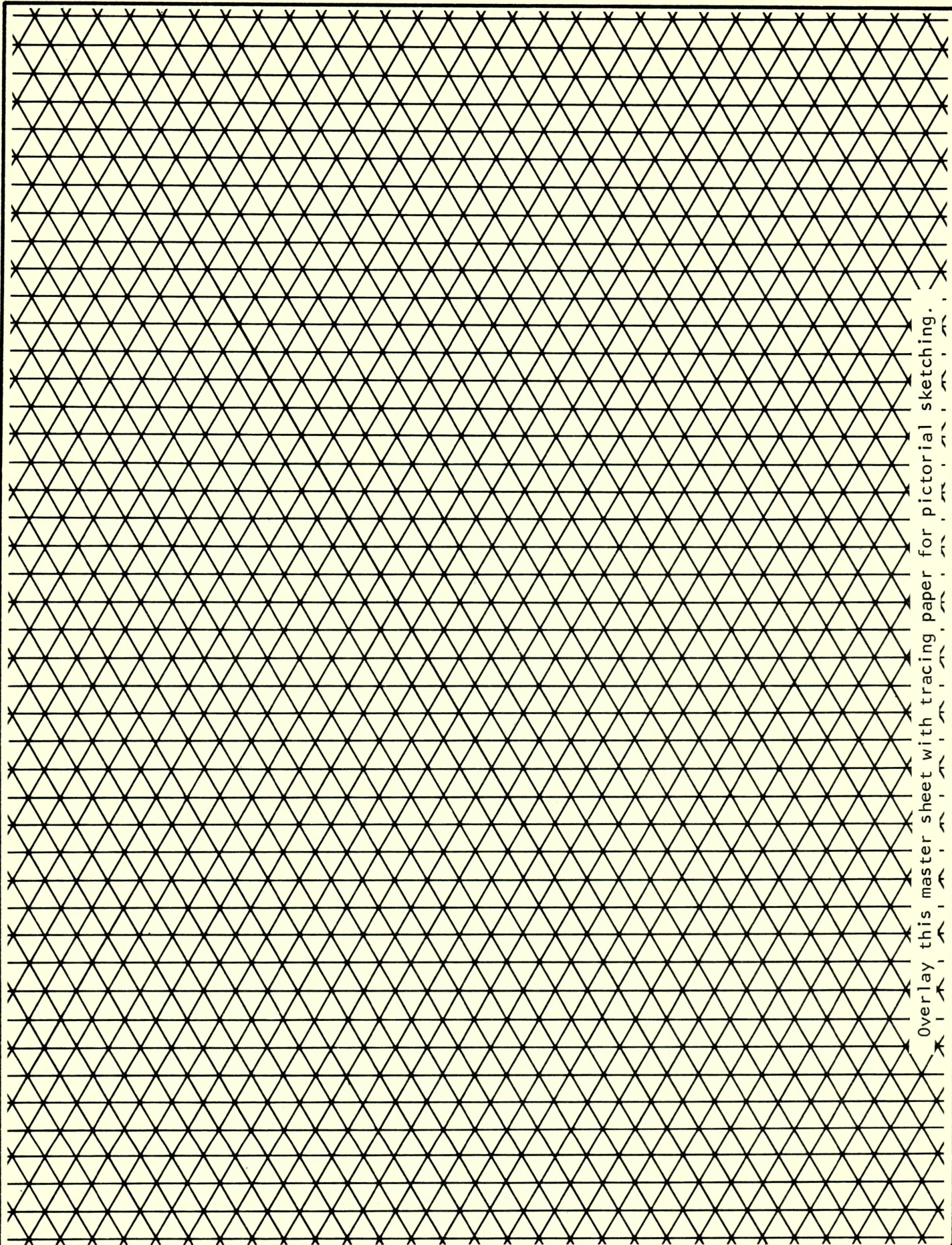
PLOT THE DATA ON BOTH THE RECTILINEAR AND SEMILOGARITHMIC COORDINATES BELOW, USING SMALL OPEN CIRCLES (O) TO DENOTE THE POINTS. DRAW SMOOTH CURVES TO FIT THE POINTS, LABEL ALL SCALES COMPLETELY, AND INCLUDE AN APPROPRIATE TITLE ON EACH GRAPH.



x	I_x/I_0
0	1.00
2.2	.80
5.1	.60
6.9	.50
9.2	.40
12.0	.30
16.1	.20
23.1	.10
25.3	.08
28.1	.06
32.2	.04
39.1	.02
46.0	.01

Photo by MPG courtesy of James B. Wilson, D.D.S.

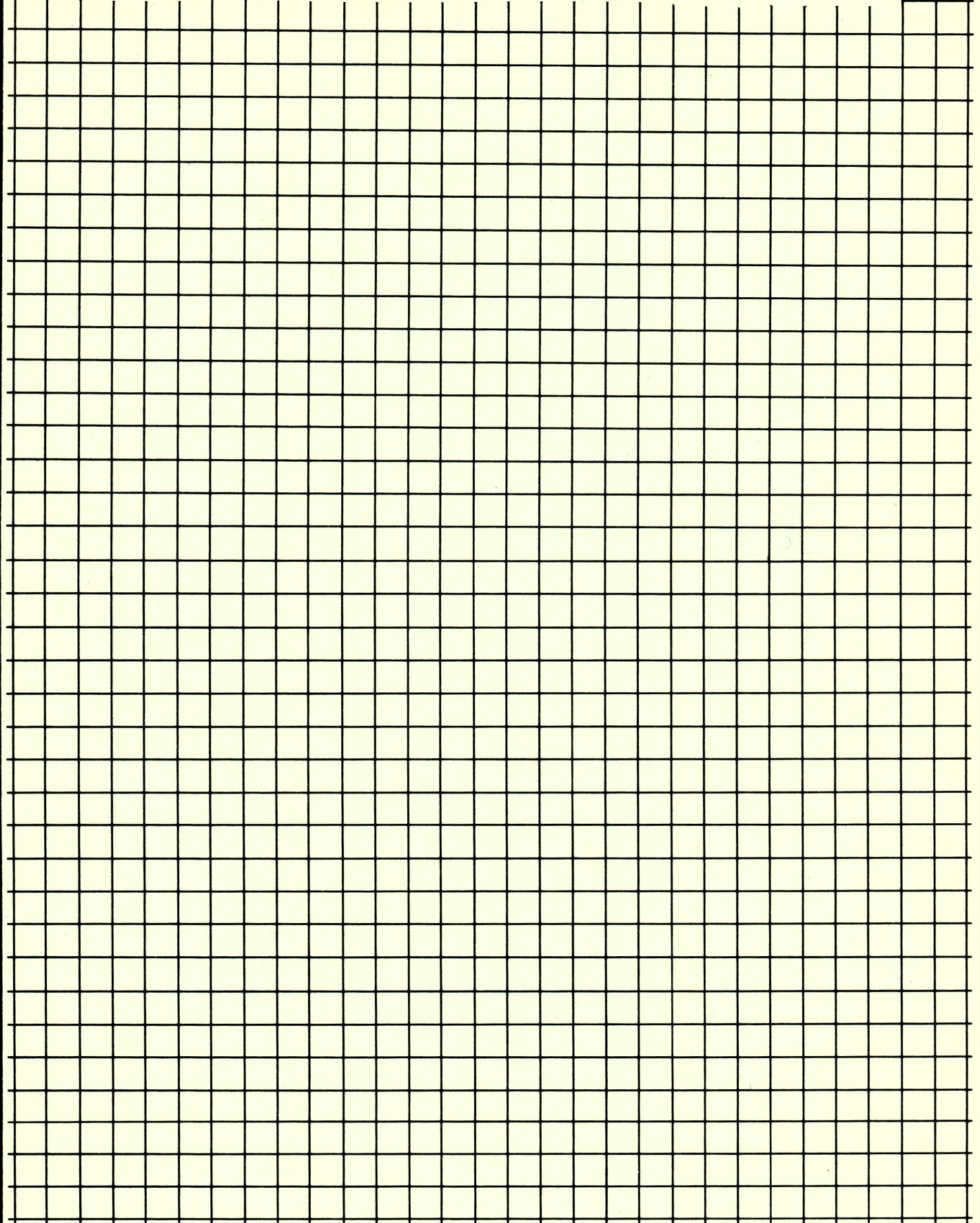




Overlay this master sheet with tracing paper for pictorial sketching.

ENGINEERING GRAPHICS and DESIGN PROBLEMS	NAME [] FILE NO [] SEC [] DATE []	minutes	grade	82
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Overlay this master sheet with tracing paper for orthographic sketching.



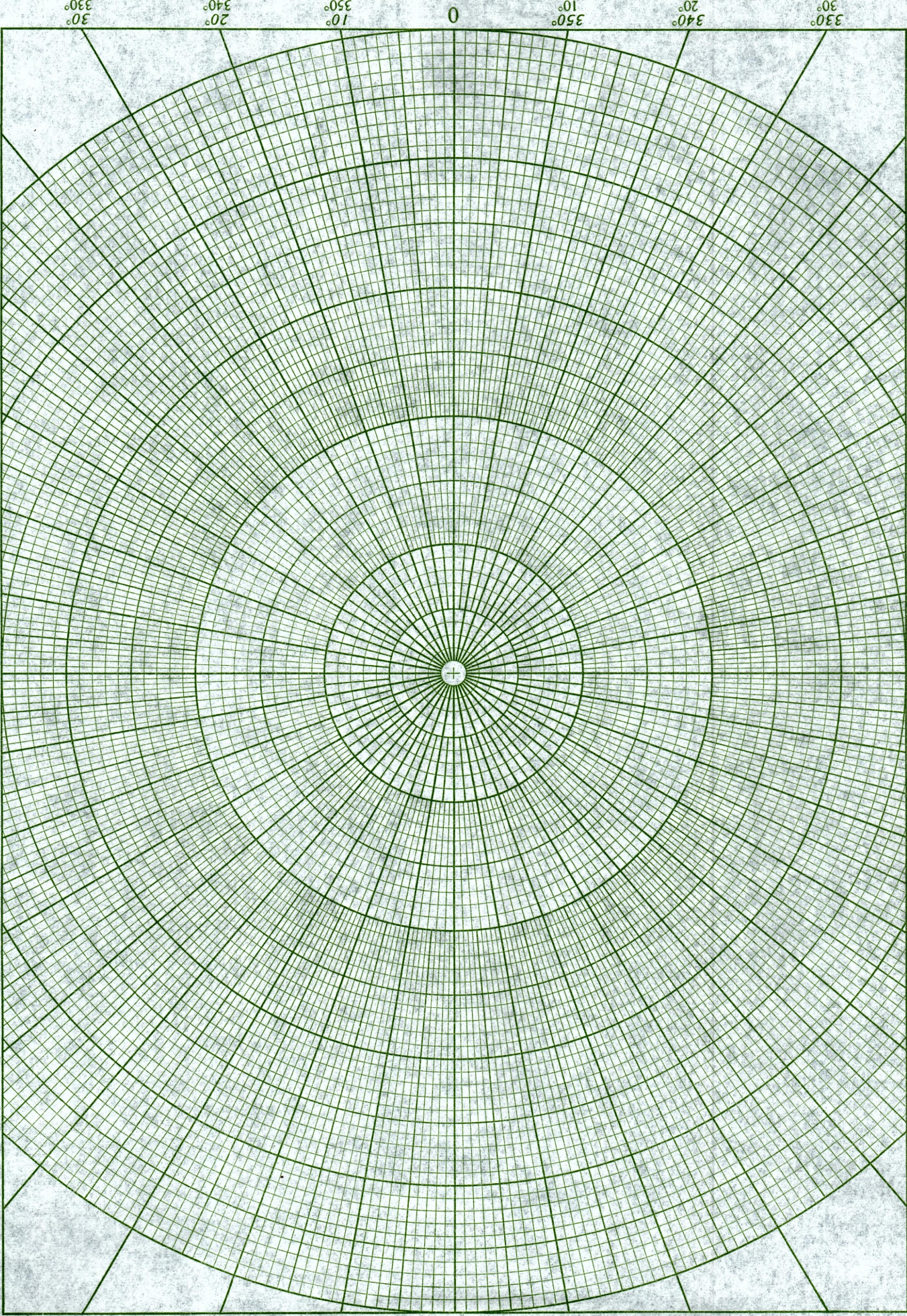
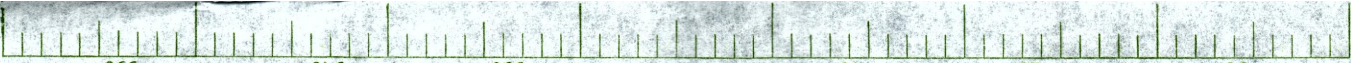
and DESIGN PROBLEMS ?
ENGINEERING SKETCHES

FIG NO.
NAME

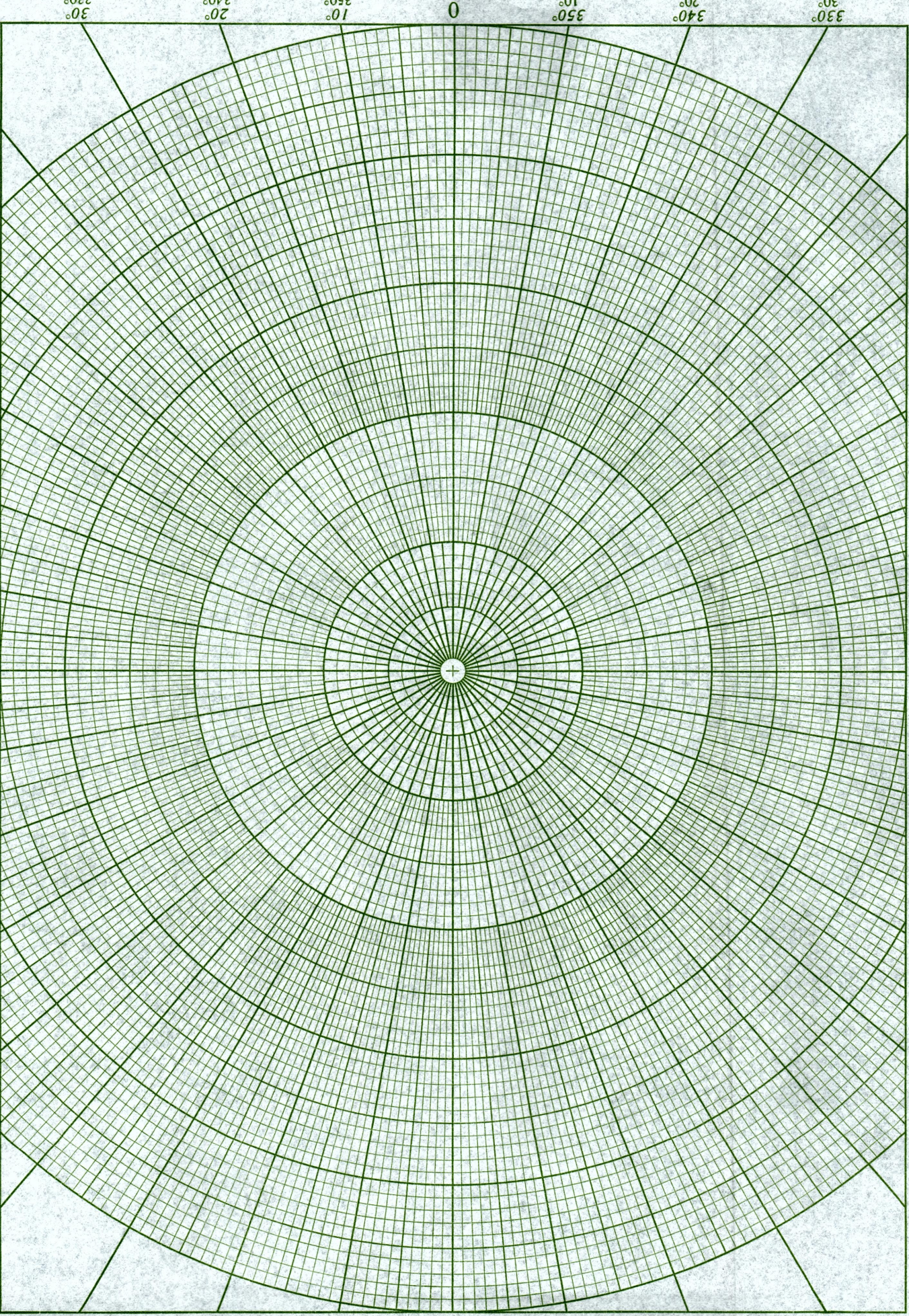
SEC

DATE

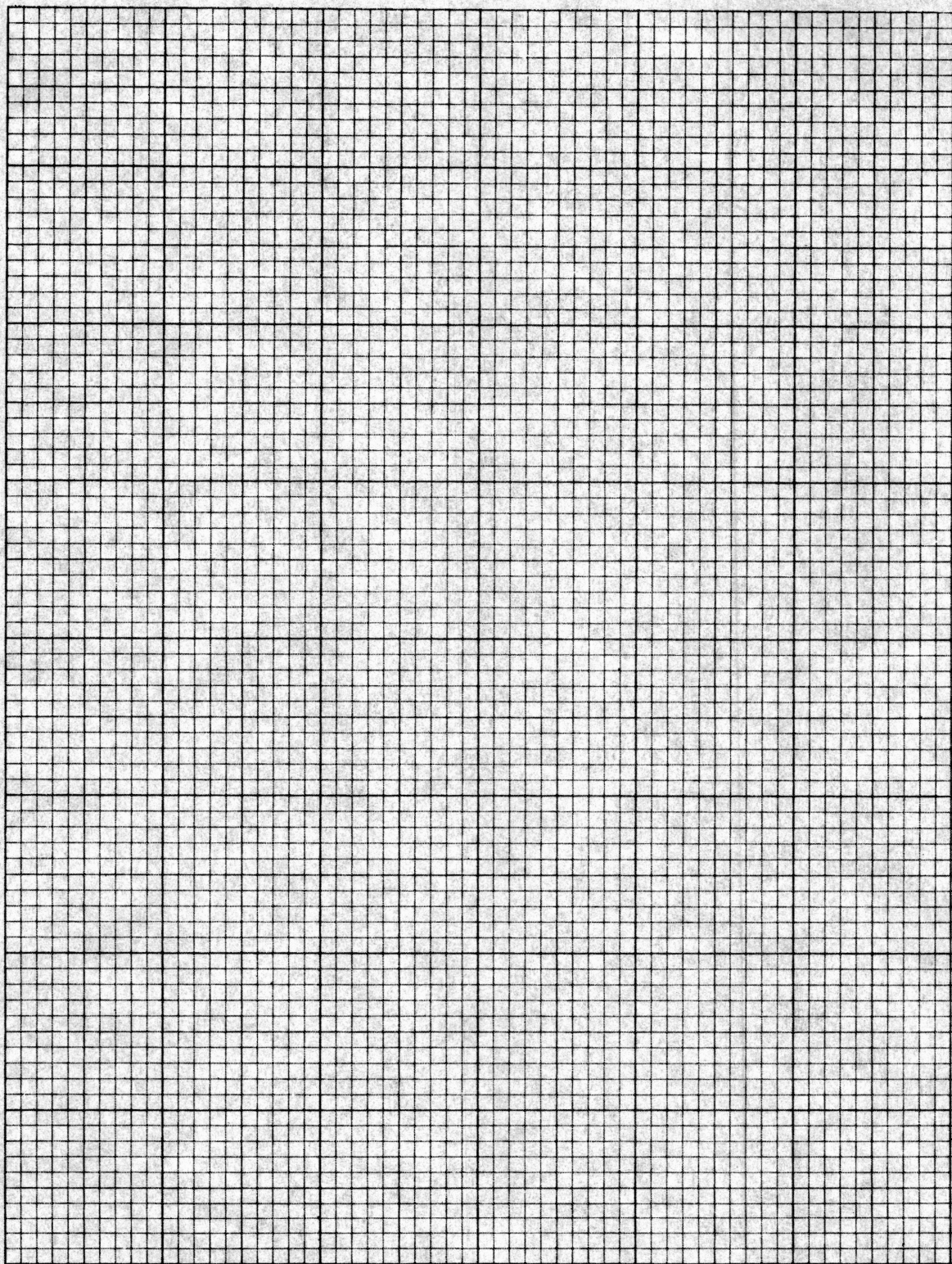
minutes
grade

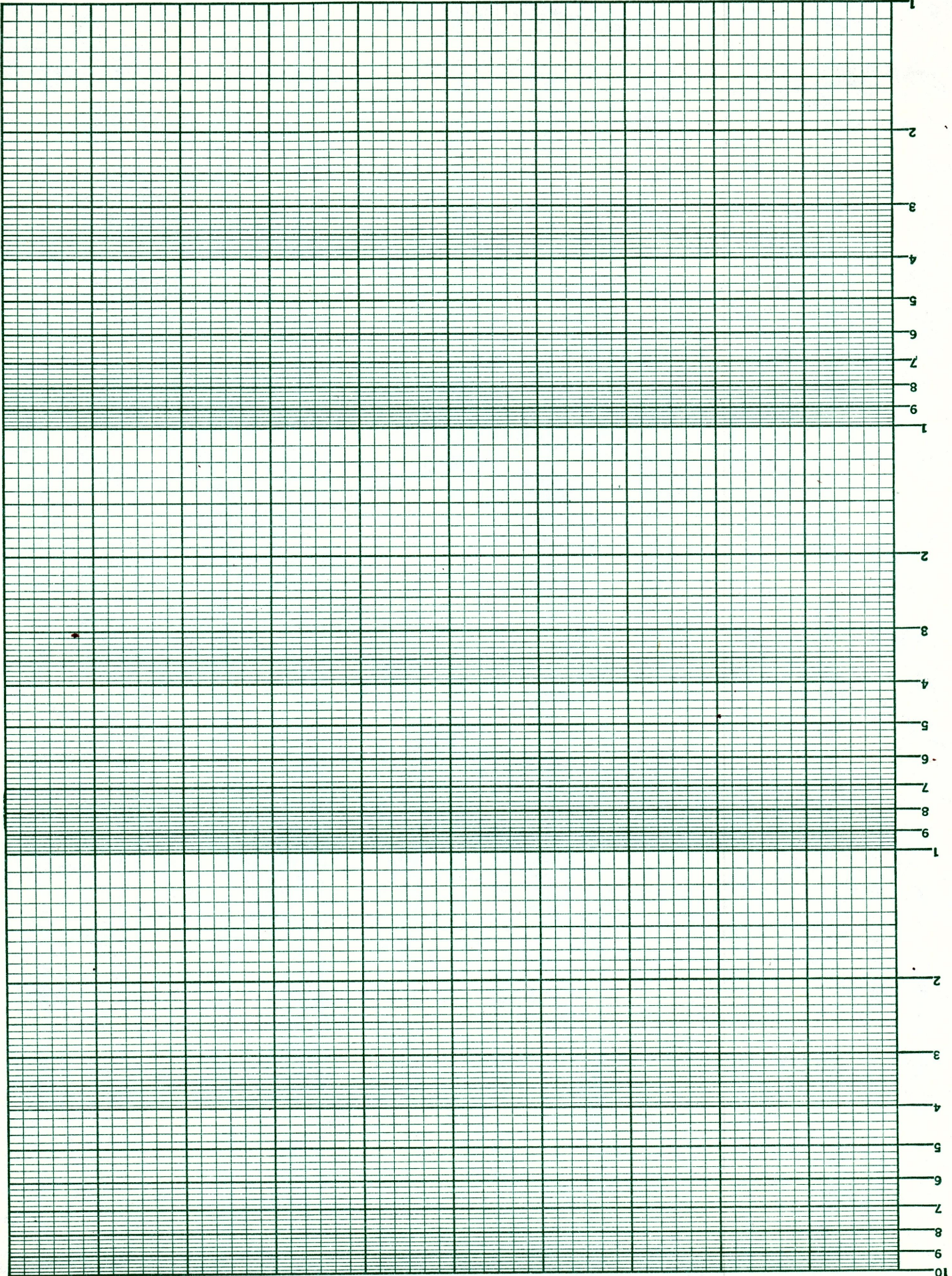


KE POLAR COORDINATE 46 4412
KEUFFEL & ESSER CO. MADE IN U.S.A.

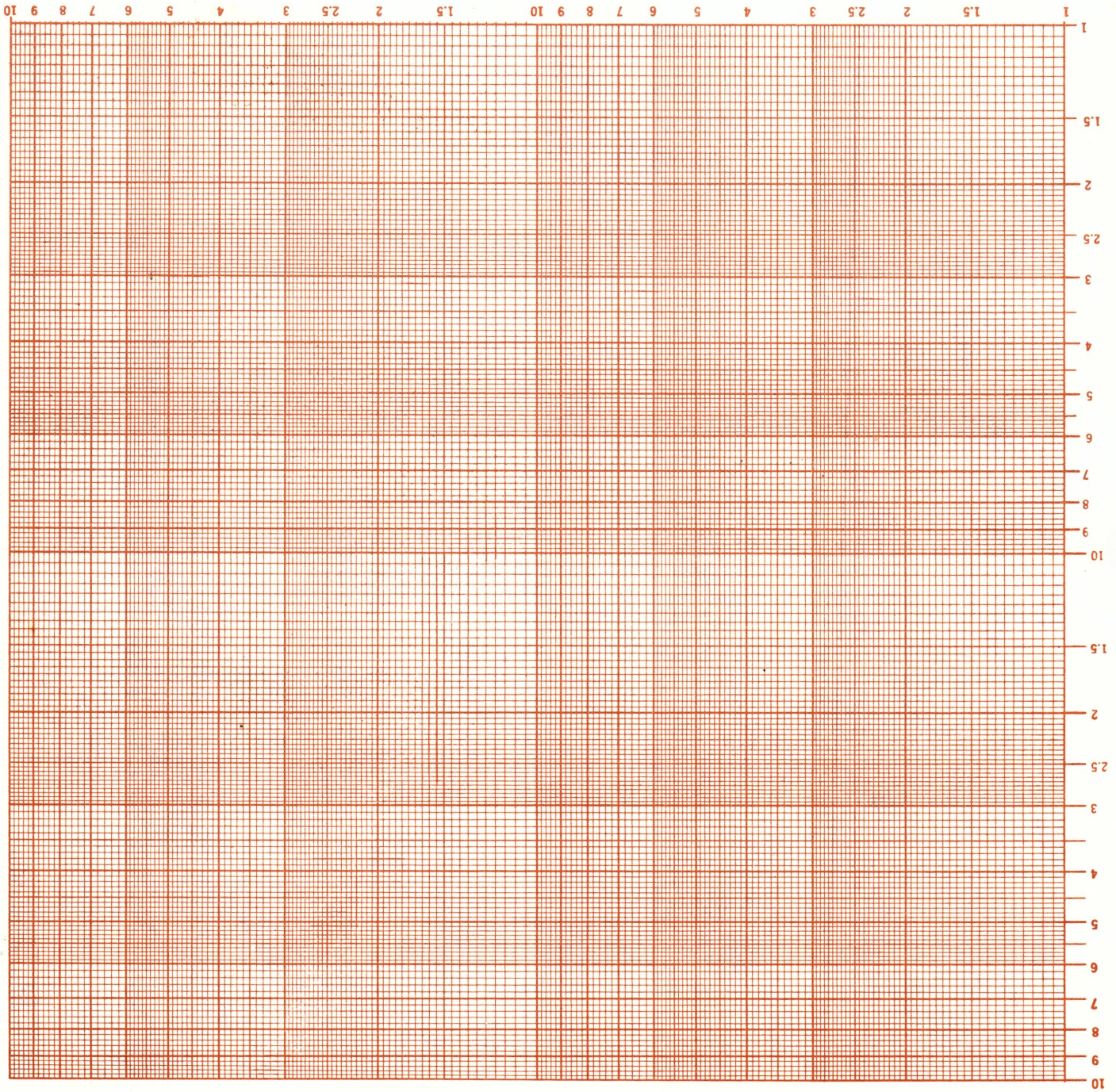


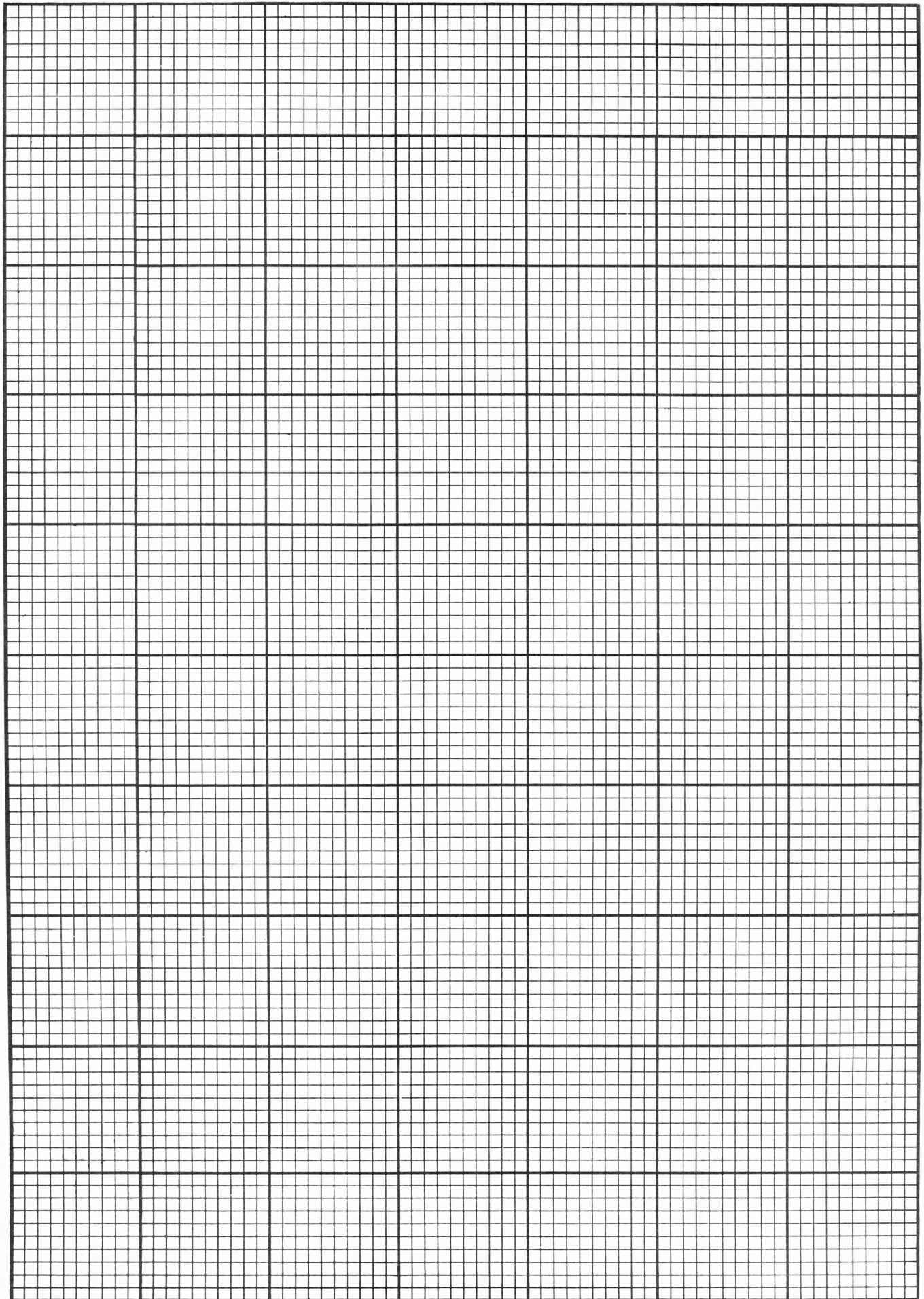
K&E POLAR CO-ORDINATE 46 4412
KEUFFEL & ESSER CO. MADE IN U.S.A.

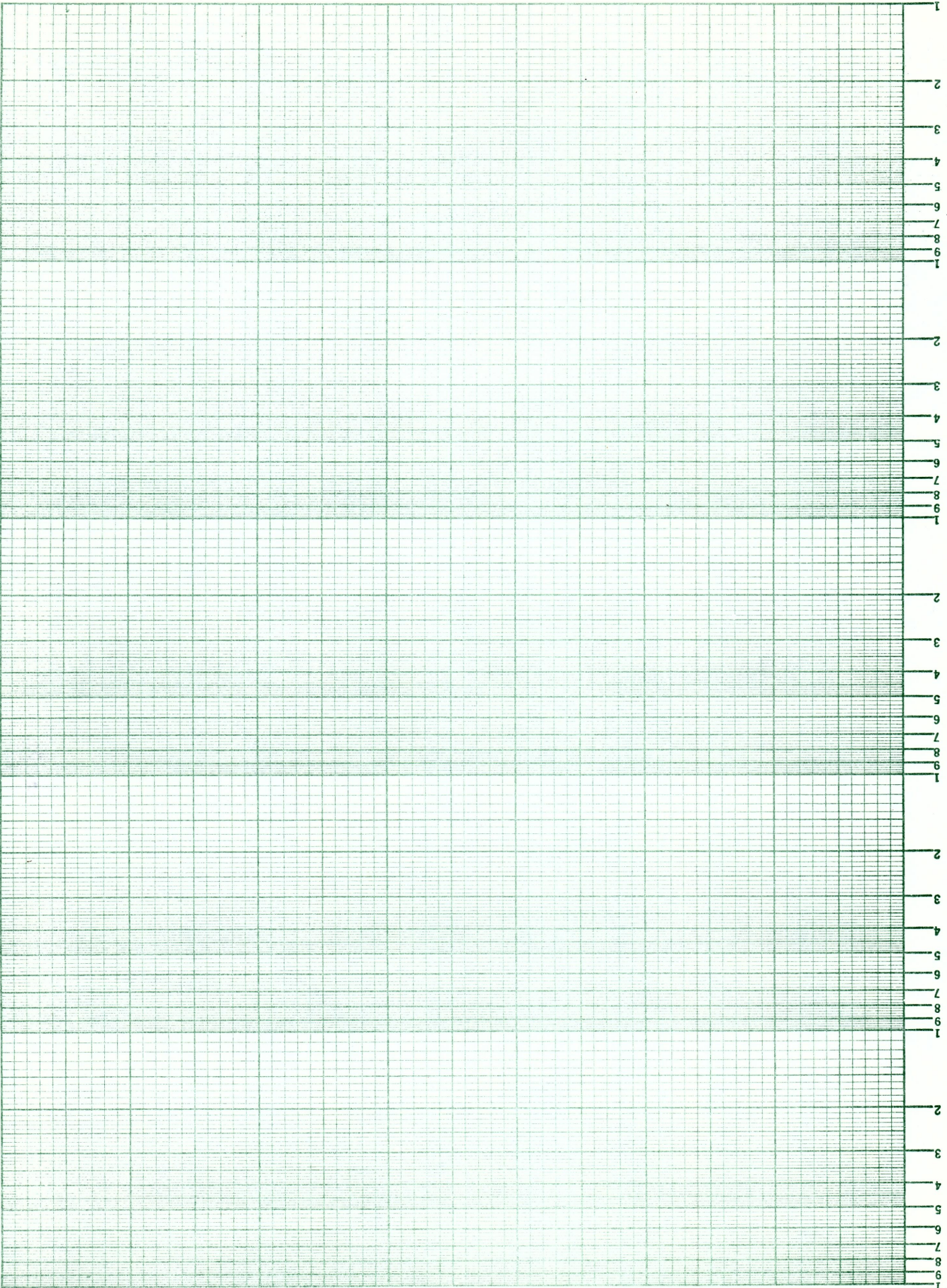




Logarithmic, 2 X 2 Cycles





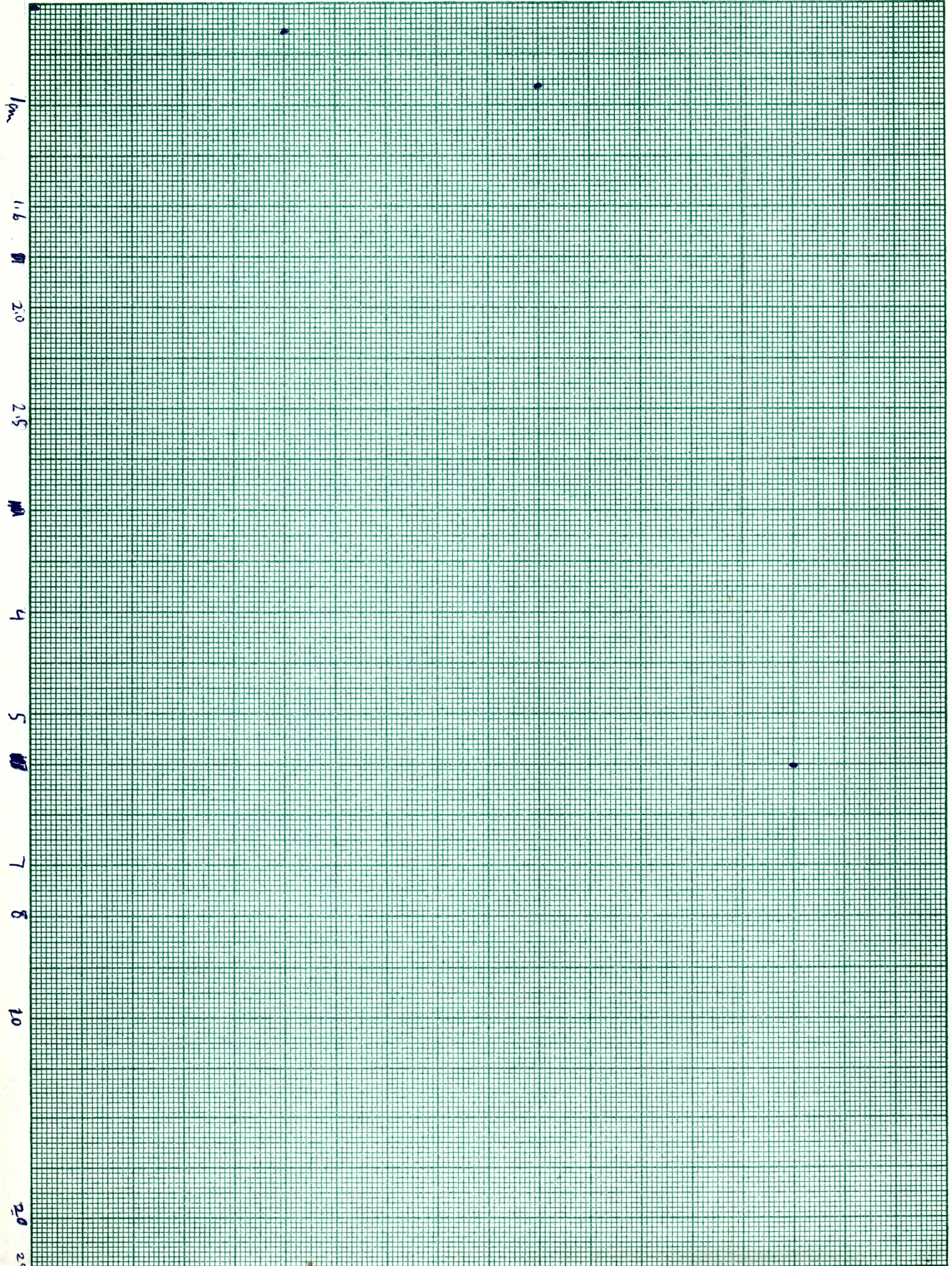


1

11

101

1001



1.0

1.6

2.0

2.5

4

5

7

8

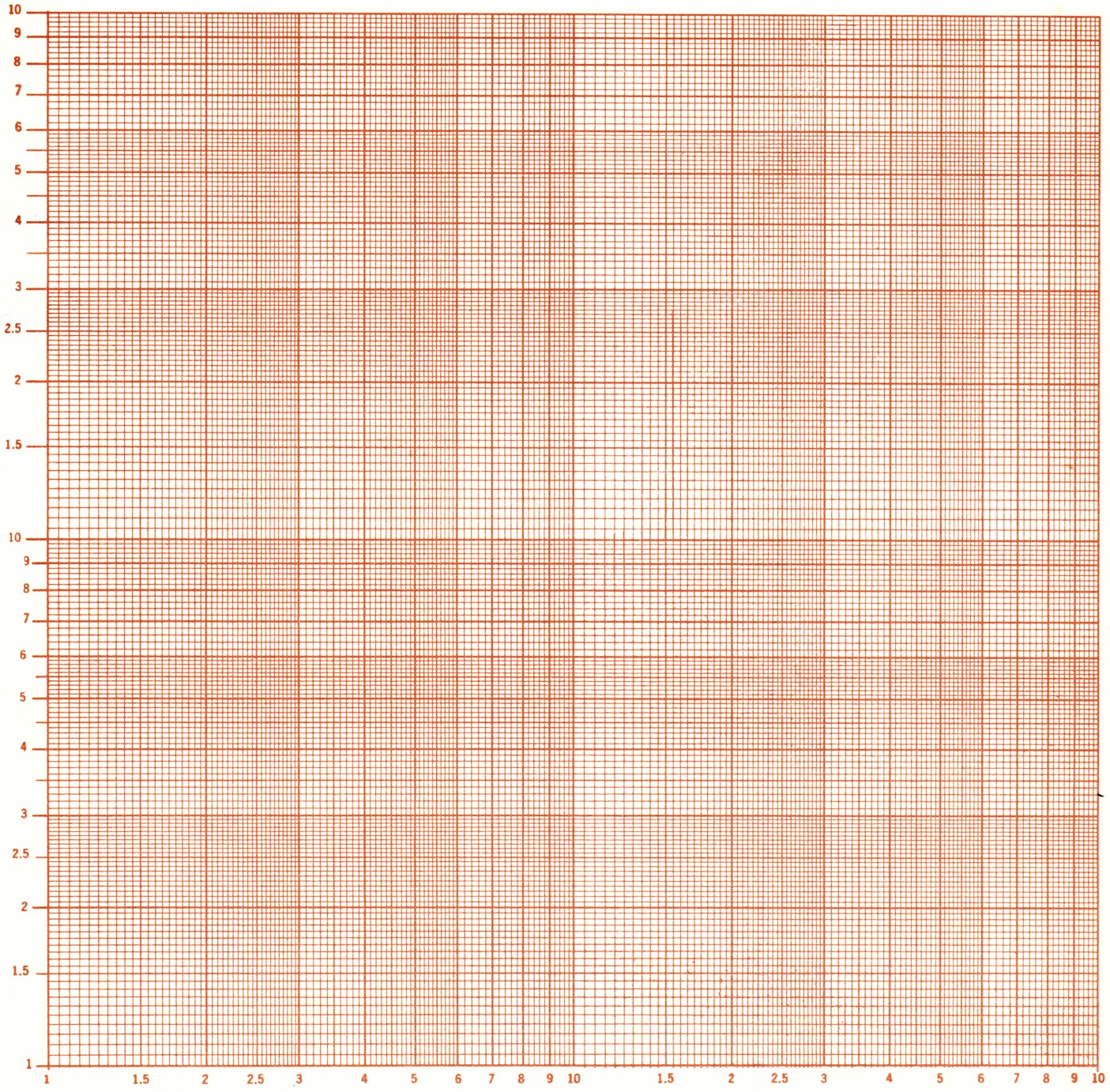
10

20

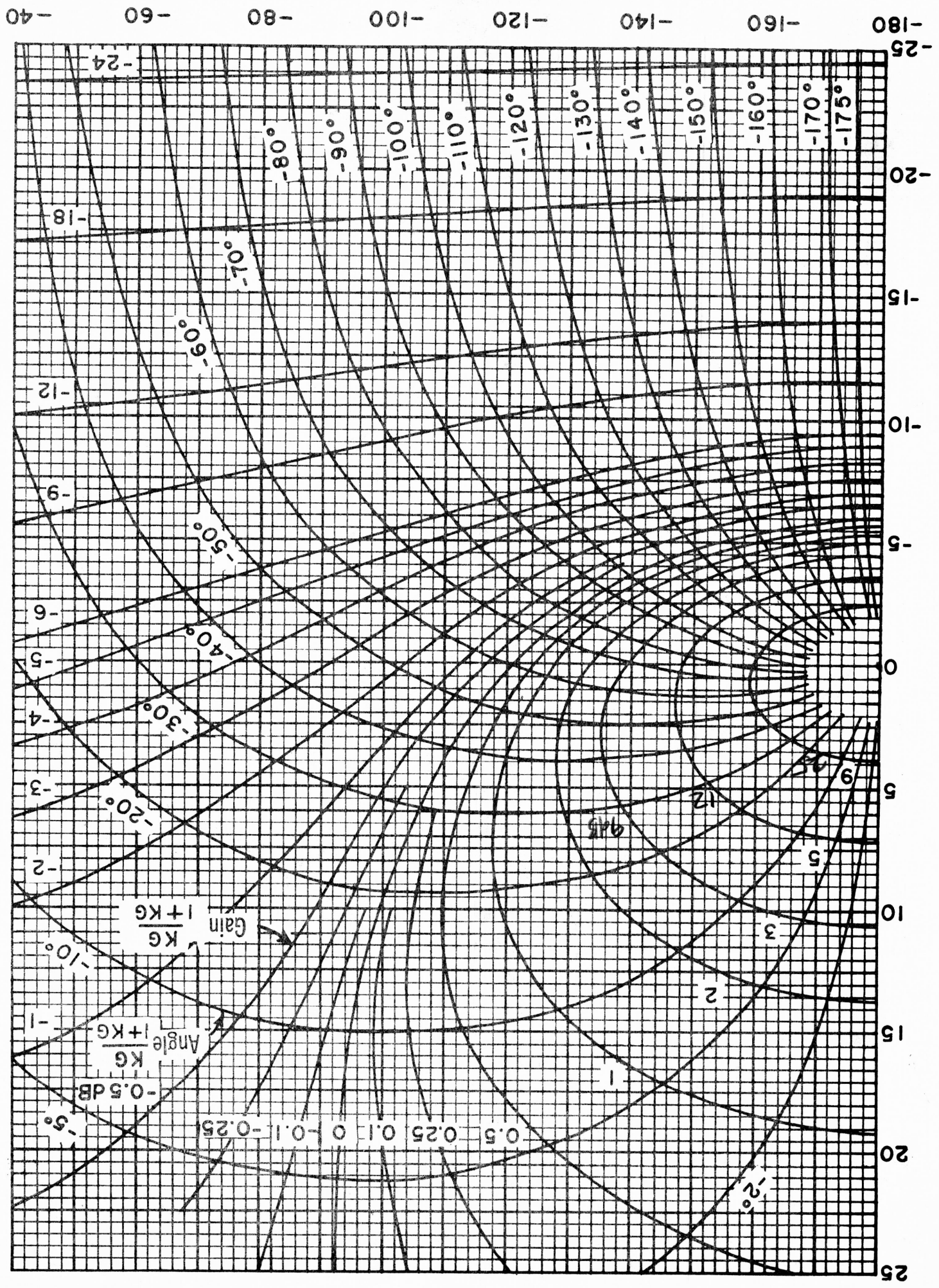
25

1001

1001



Logarithmic, 2 X 2 Cycles



Gain decibels

Phase angle in degrees

1
9
8
7
6
5
4
3
2
1
9
8
7
6
5
4
3
2
1
9
8
7
6
5
4
3
2
1
9
8
7
6
5
4
3
2
1
9
8
7
6
5
4
3
2
1

ENGINEERING GRAPHICS
and DESIGN PROBLEMS 3

NAME _____

FILE NO. _____

SEC. _____

DATE _____

minutes

grade