

ABC

TRADEMARK

system Wern

ABC slide rule

ABC-Rechner

Calculateur ABC

Il regolo calcolatore ABC

Regla de cálculo ABC

ABC räknesticka

a^2 a^3 a^n $\sqrt[n]{a}$ ${}^n\log$ \sin \cos \tan \cot $\text{arc} \dots$

The runner is your guide for calculations.
On the runner you find letters that will indicate and locate all scales.
Those letters appear below each number, in every illustrated example.
This way you will find for every number the correct scale.

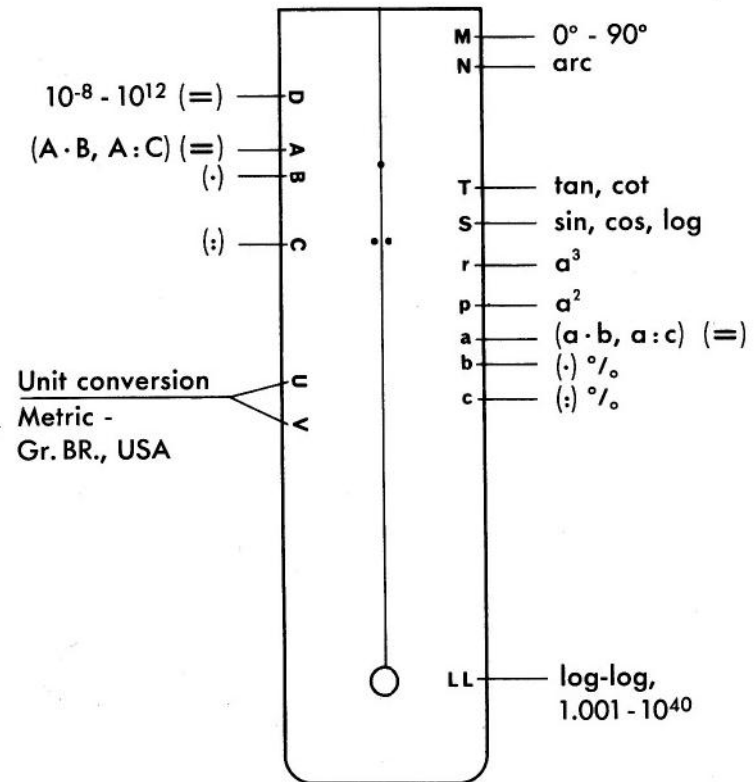
Der Läufer ist Ihr Wegweiser für die Berechnungen.
Sie finden auf dem Läufer Buchstaben, die die darunterliegenden
Skalen bezeichnen. Dieselben Buchstaben stehen unter jeder Zahl in den
gezeigten Beispielen. So finden Sie für jede Zahl sofort die richtige Skala.

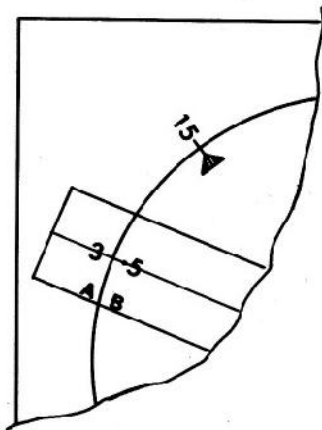
Le curseur est votre guide pour les calculations.
Sur le curseur vous remarquez des lettres indiquant les échelles en dessous.
Les mêmes lettres sont marquées sous chaque chiffre dans les exemples
illustrés. Ainsi vous trouvez pour chaque chiffre immédiatement l'échelle
correspondante.

Il cursore è una guida sicura per i Vostri calcoli.
Sul cursore sono riportate delle lettere che indicano le differenti scale e
le loro rispettive posizioni.
Queste lettere sono riportate sotto ogni numero negli esempi illustrativi.
Non vi è pericolo di sbagliare, per ogni numero troverete la scala esatta.

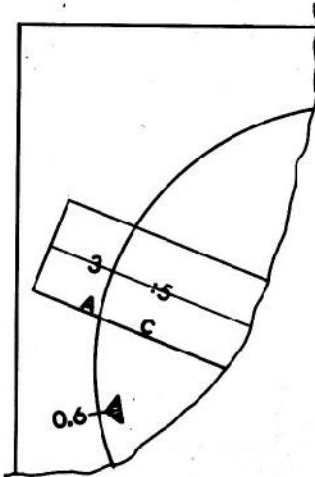
El cursor le servirá de guía en los cálculos.
En el cursor encontrará letras que designan las escalas e indican su
emplazamiento.
Estas letras se encuentran debajo de las cifras en cada ejemplo ilustrado.
De esta manera encontrará la escala adecuada para cada cantidad.

Löparen är Er vägvisare för beräkningarna.
På löparen hittar Ni bokstäver som betecknar skalorna och angiver deras
placering. Dessa bokstäver finns angivna under talen i varje illustrerat
exempel. På detta sätt hittar Ni för varje tal den rätta skalan.

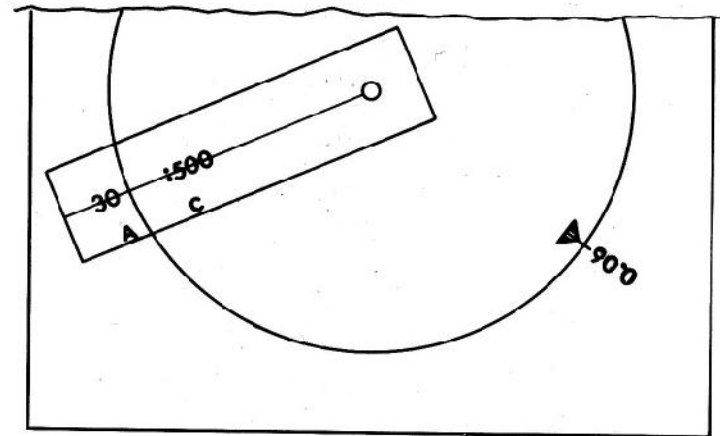




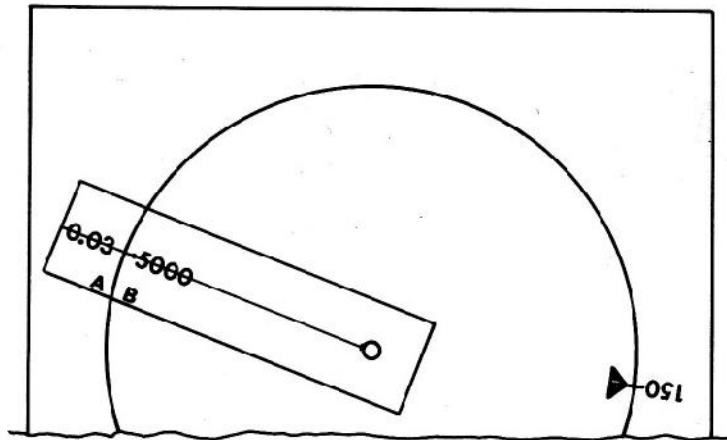
① $3 \cdot 5 = 15$
 A B \blacktriangleright A
 Ex. $6 \cdot 5 =$



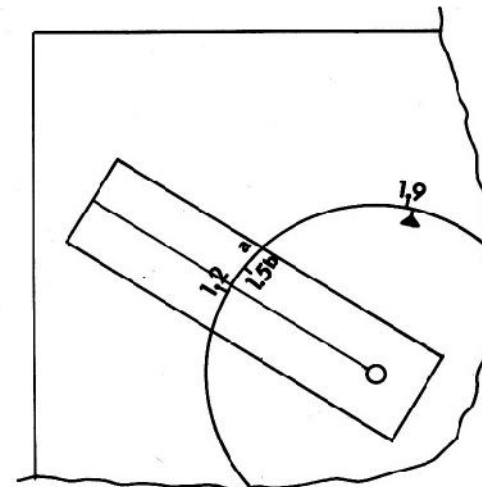
② $3 \cdot 5 = 0.6$
 A C \blacktriangleright A
 Ex. $150 \cdot 30 =$



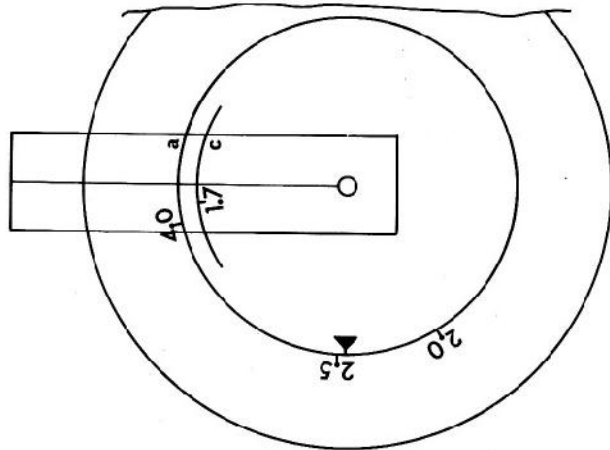
④ $30 \cdot 500 = 0.06$
 A C \blacktriangleright A
 Ex. $20 \cdot 25 =$



③ $0.03 \cdot 5000 = 150$
 A B \blacktriangleright A
 Ex. $400 \cdot 0.06 =$

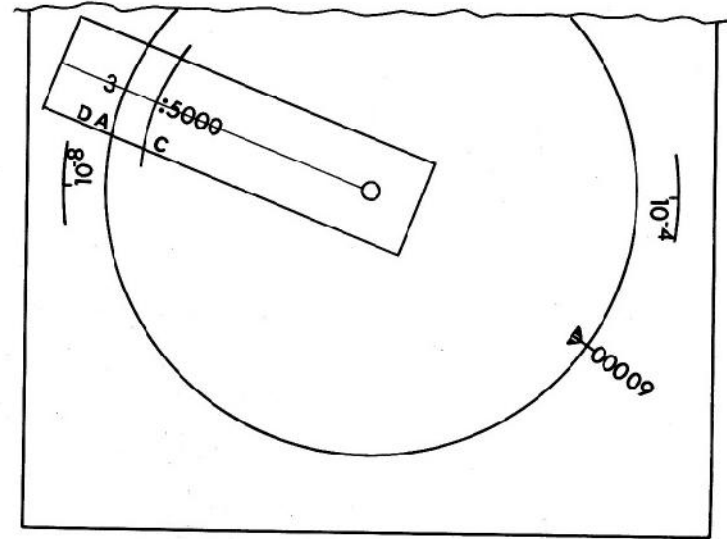


⑤ $1.22 \cdot 1.58 = 1.928$
 a b \blacktriangleright a
 Ex. $4.7 \cdot 2.5 =$



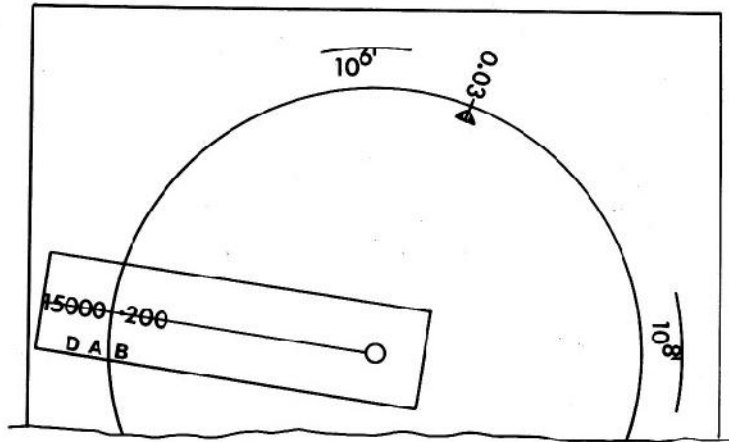
$$\textcircled{6} \quad \frac{4.37}{a} : \frac{1.775}{c} = 2.46$$

$$\text{Ex. } 8.4 : 1.91 =$$



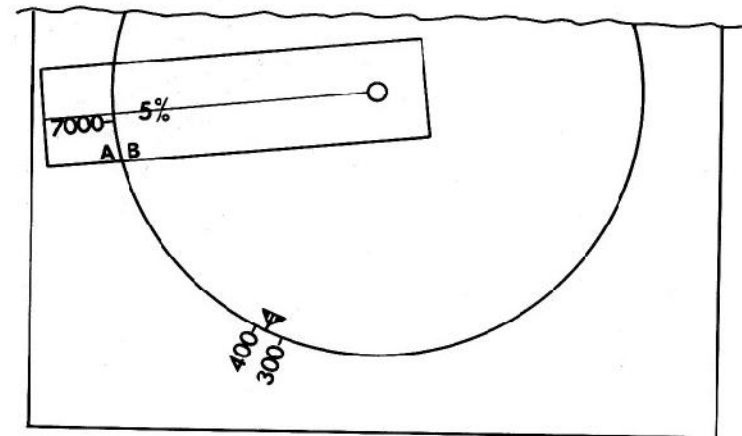
$$\textcircled{8} \quad \frac{3}{A} : \frac{5000}{C} = \frac{60000}{D} \cdot 10^{-8} = 6 \cdot 10^{-4}$$

$$\text{Ex. } 2 : 8000 =$$



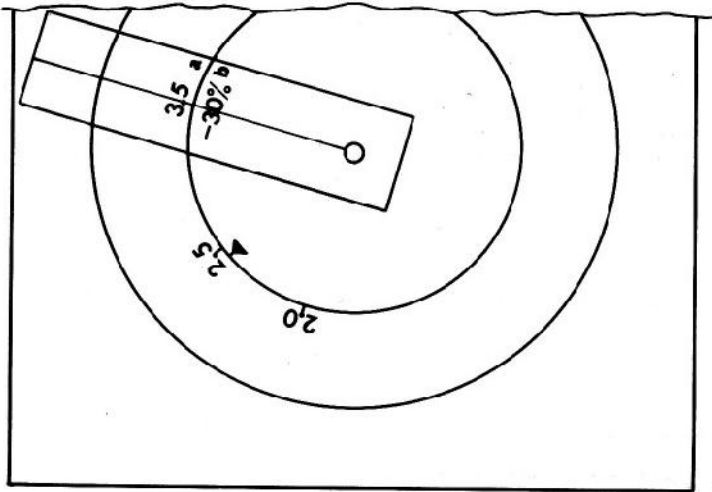
$$\textcircled{7} \quad \frac{15000}{A} \cdot \frac{200}{B} = \frac{0.03}{D} \cdot 10^8 = 3 \cdot 10^6$$

$$\text{Ex. } 500000 \cdot 4000 =$$



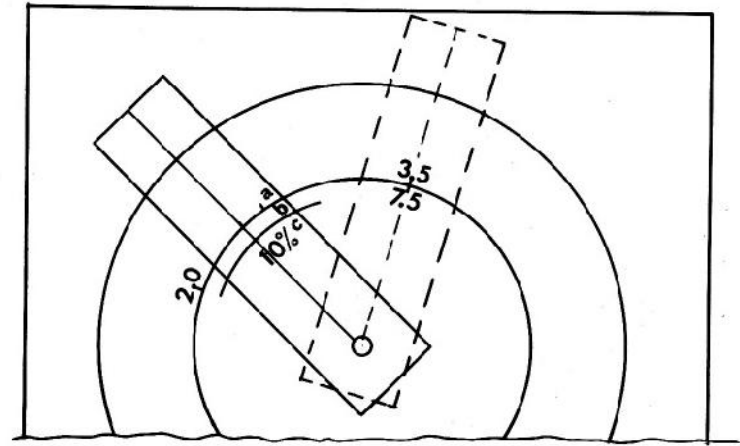
$$\textcircled{9} \quad \frac{7400}{A} \cdot \frac{5\%}{B} = \frac{370}{A}$$

$$\text{Ex. } 450 \cdot 2\% =$$



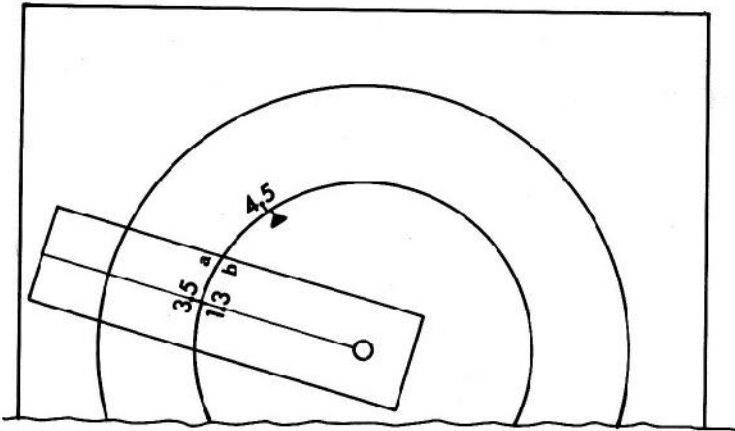
⑩ $3.50 - 30\% = 2.45$
 $\begin{matrix} a & b & \rightarrow & a \end{matrix}$

Ex. $7.80 - 50\% =$



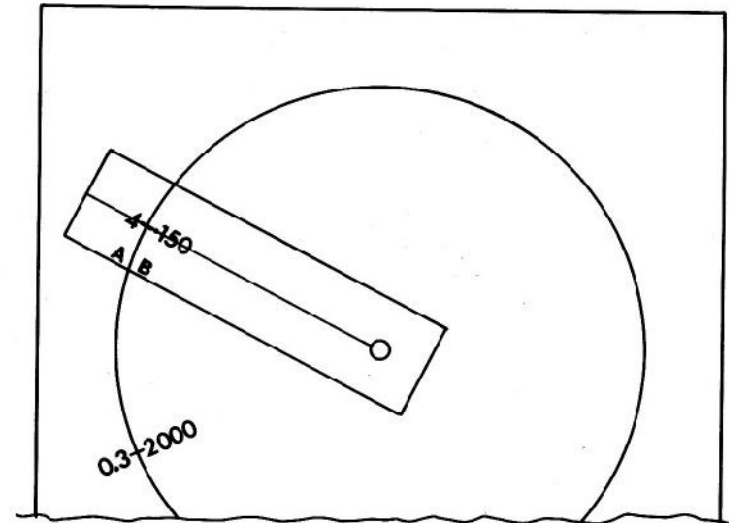
⑫ $3.50 - 25\% - 10\% = 2.36$
 $\begin{matrix} a & b & c & a \end{matrix}$

Ex. $6.20 - 20\% - 30\% =$



⑪ $3.50 + 30\% = 4.55$
 $\begin{matrix} a & b & \rightarrow & a \end{matrix}$

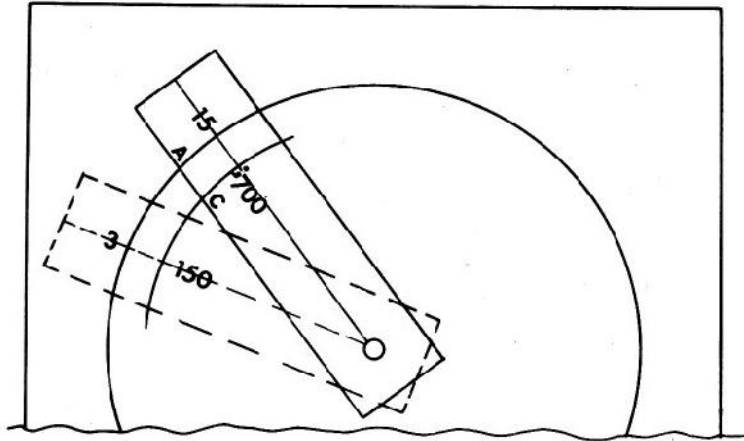
Ex. $2.20 + 1/3 =$



⑬ $4 \cdot 150 = X \cdot 2000 \quad X = 0.3$
 $\begin{matrix} A & B & A & B \end{matrix}$

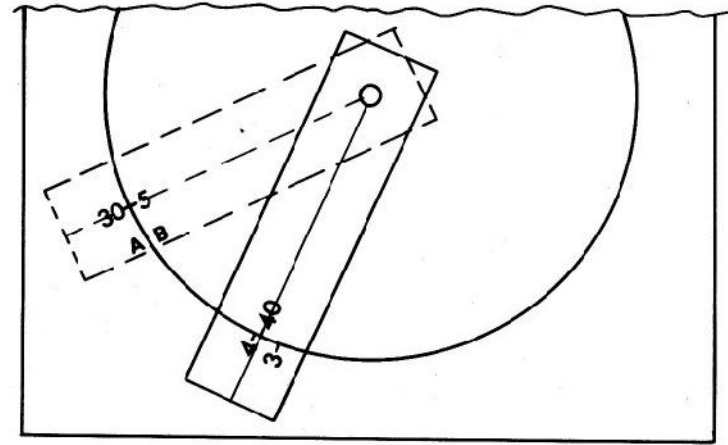
Ex. $15 \cdot 40 = X \cdot 3 \quad X =$

6



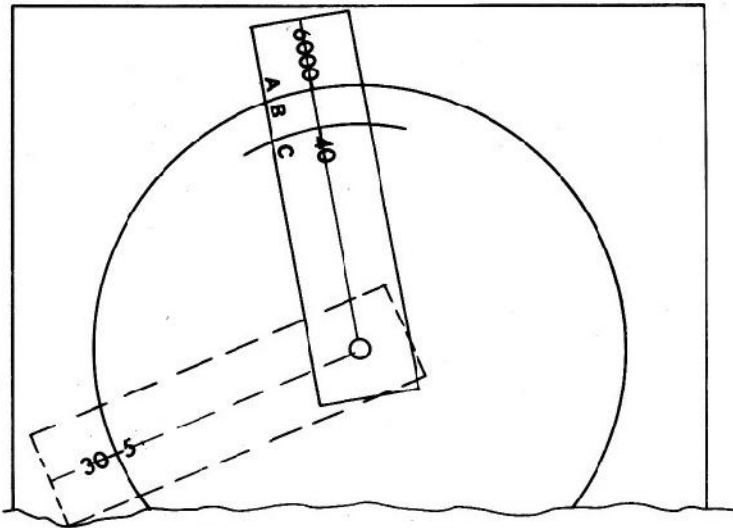
⑭ $3:150 = 15:X$ $X=750$
 $A \quad C \quad A \quad C$

Ex. $60:0.20 = 150:X$ $X=$



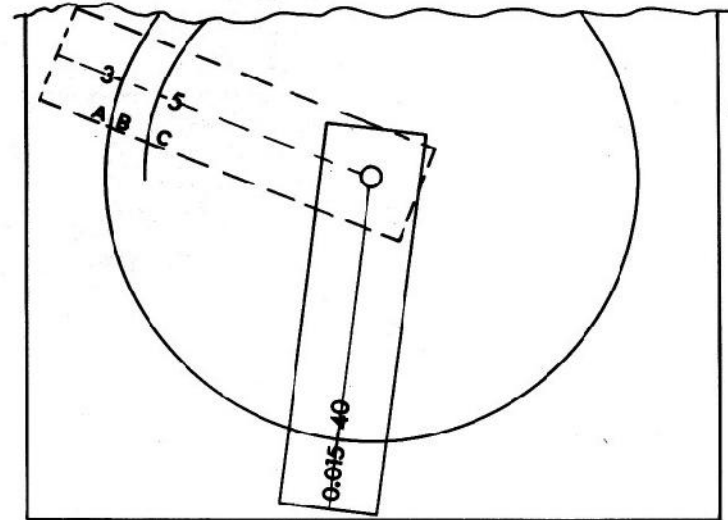
⑯ $30 \cdot 5 : 40 = 3.75$
 $A \quad B \quad B \quad A$

Ex. $15 \cdot 6 : 30 =$



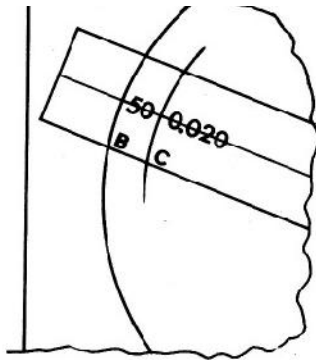
⑮ $30 \cdot 5 \cdot 40 = 6000$
 $A \quad B \quad C \quad A$

Ex. $25 \cdot 7 \cdot 4 =$



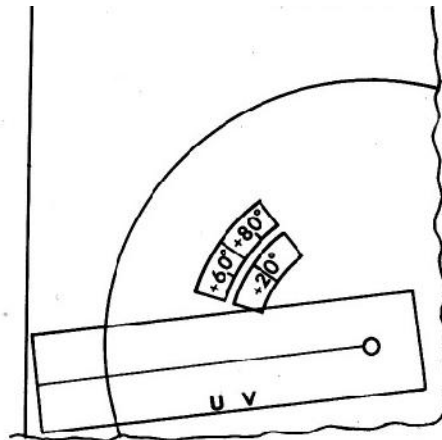
⑰ $3:5:40 = 0.015$
 $A \quad C \quad B \quad A$

Ex. $90:5:9 =$



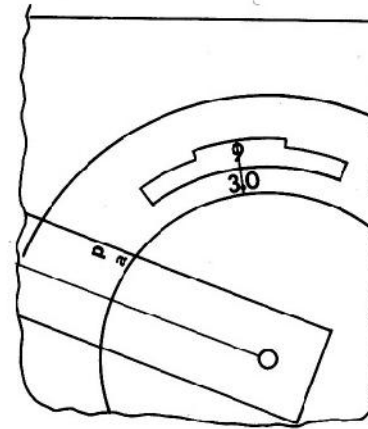
⑱ $1:50 = 0.020$
 $B \quad C$

Ex. $1:20 =$



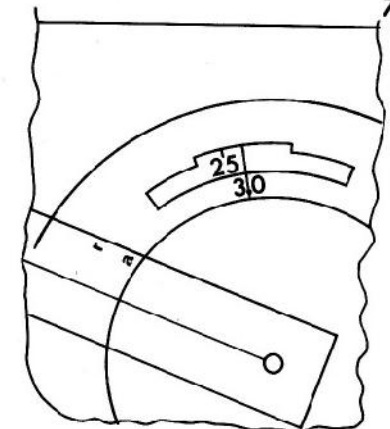
⑲ $68^\circ\text{F} = X^\circ\text{C}$ $X = 20^\circ\text{C}$
 $U \quad V$

Ex. $86^\circ\text{F} = X^\circ\text{C}$ $X =$



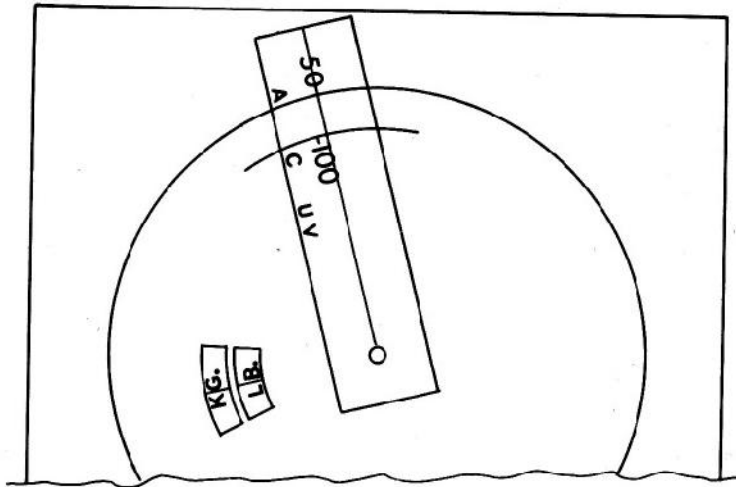
⑳ $3^2 = 9$
 $a \quad p$

Ex. $5^2 =$



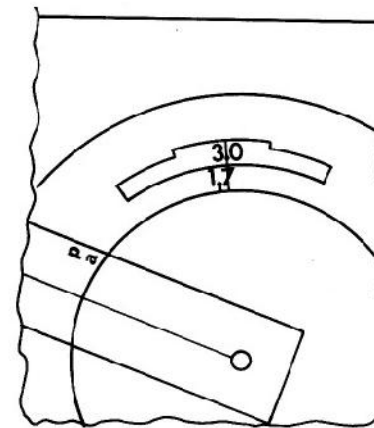
㉑ $3^3 = 27$
 $a \quad r$

Ex. $5^3 =$



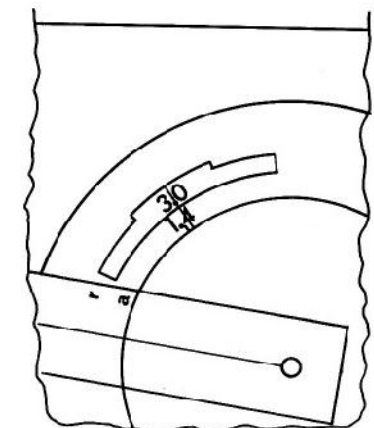
㉒ $50 \text{ kg} = X \text{ lb}$ $X = 110 \text{ lb}$
 $U \quad V$

Ex. $6.1 \text{ m} = X \text{ ft}$ $X =$



㉓ $2\sqrt{3} = 1.732$
 $p \quad a$

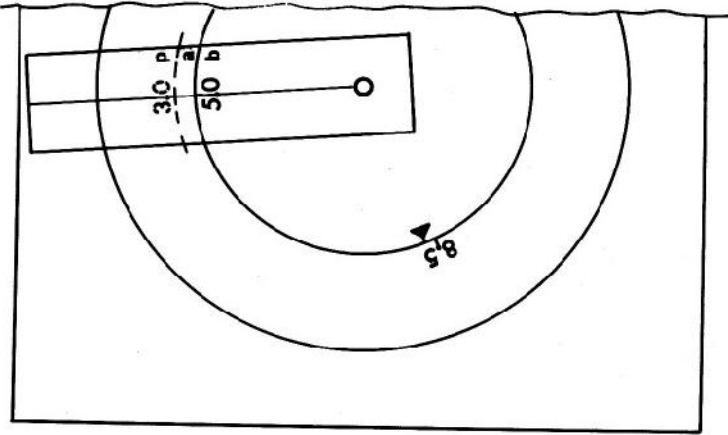
Ex. $2\sqrt{6} =$



㉔ $3\sqrt{3} = 1.442$
 $r \quad a$

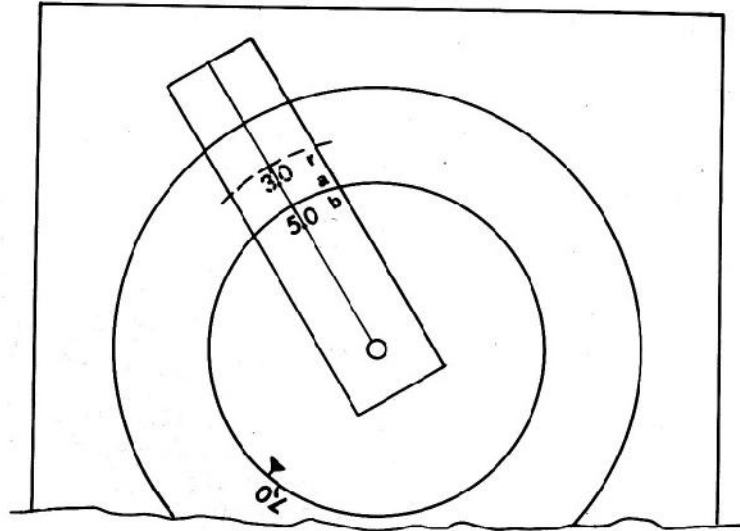
Ex. $3\sqrt{21} =$

8



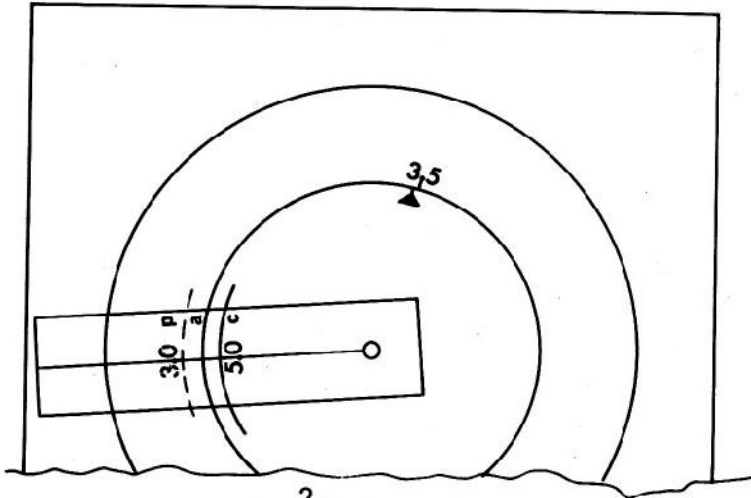
25 $2\sqrt{3} \cdot 5 = 8.66$
 $p \ b \ \blacktriangleright \ a$

Ex. $2\sqrt{6} \cdot 4 =$



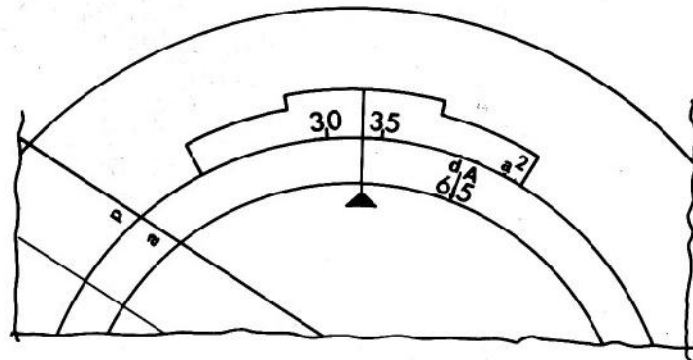
27 $3\sqrt{3} \cdot 5 = 7.21$
 $r \ b \ \blacktriangleright \ a$

Ex. $3\sqrt{6} \cdot 3 =$



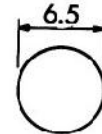
26 $2\sqrt{3} \cdot 5 = 0.346$
 $p \ c \ \blacktriangleright \ a$

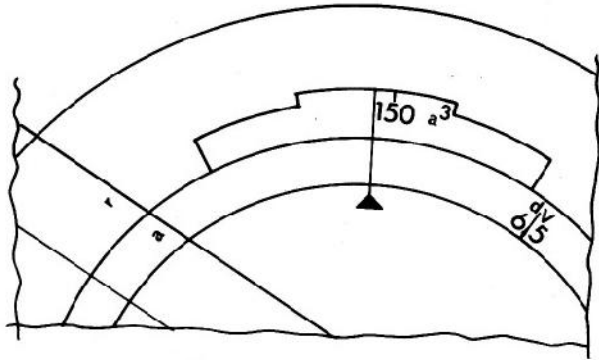
Ex. $2\sqrt{6} \cdot 1.4 =$



28 $\frac{\pi}{4} \cdot 6.5^2 = 33.2$
 $d_A \ \blacktriangleright \ p$

Ex. $\frac{\pi}{4} \cdot 3.5^2 =$

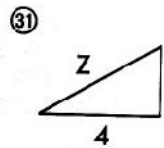
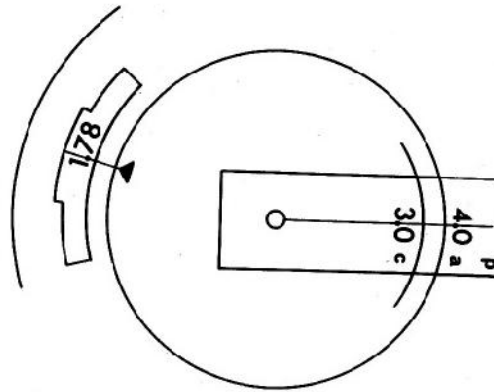




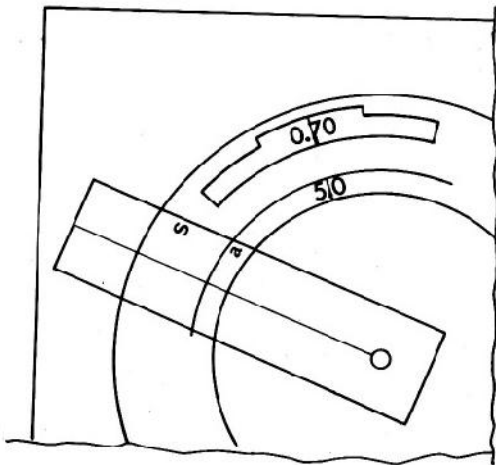
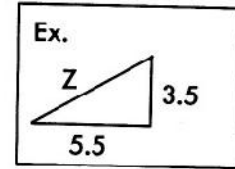
29) $\frac{\pi}{6} \cdot 6.5^3 = 144$

$d_v \rightarrow r$

Ex. $\frac{\pi}{6} \cdot 3.5^3 =$

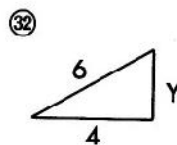
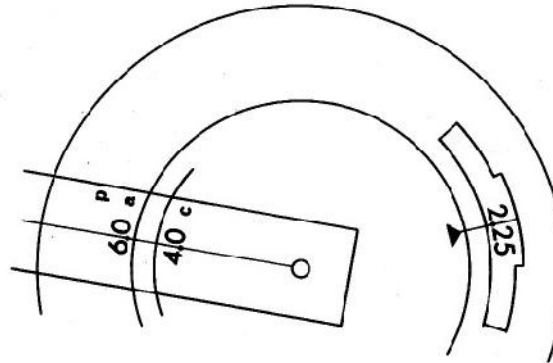


31) $Z = \sqrt{4^2 + 3^2} = 5$
 $\sqrt{\left(\frac{4}{3}\right)^2 + 1} = 5$
 $\uparrow \frac{p}{(p+1)}$
 $\uparrow a$

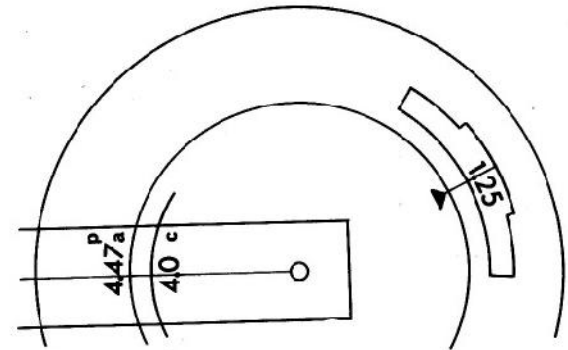
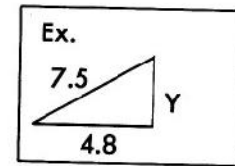


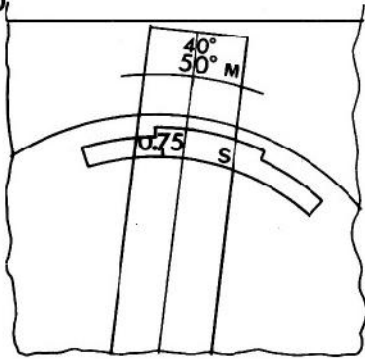
30) $10 \log \frac{5}{a} = 0.699$

Ex. $10 \log 7 =$



32) $Y = \sqrt{6^2 - 4^2} = 4.47$
 $\sqrt{\left(\frac{6}{4}\right)^2 - 1} = 4.47$
 $\uparrow \frac{p}{(p-1)}$
 $\uparrow a$



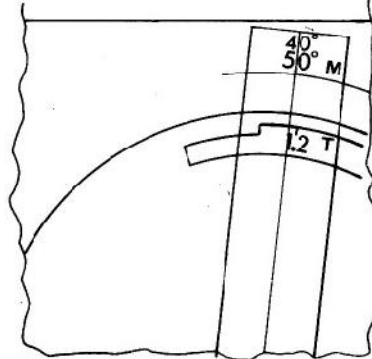


$$\textcircled{33} \quad \begin{array}{l} \sin 50^\circ = 0.766 \\ \text{M} \quad \text{S} \end{array}$$

$$\text{Ex. } \sin 65^\circ =$$

$$\textcircled{34} \quad \begin{array}{l} \cos 40^\circ = 0.766 \\ \text{M} \quad \text{S} \end{array}$$

$$\text{Ex. } \cos 25^\circ =$$

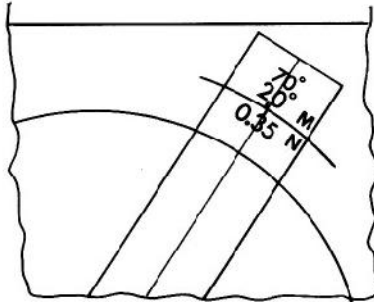


$$\textcircled{35} \quad \begin{array}{l} \tan 50^\circ = 1.19 \\ \text{M} \quad \text{T} \end{array}$$

$$\text{Ex. } \tan 65^\circ =$$

$$\textcircled{36} \quad \begin{array}{l} \cot 40^\circ = 1.19 \\ \text{M} \quad \text{T} \end{array}$$

$$\text{Ex. } \cot 25^\circ =$$

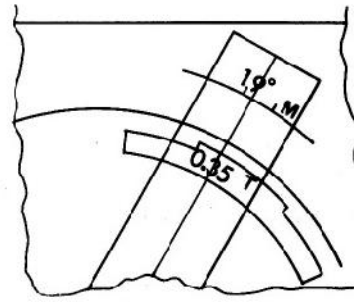


$$\textcircled{37} \quad \begin{array}{l} \text{Arc-sin } 0.350 = 20.5^\circ \\ \text{S} \quad \text{M} \end{array}$$

$$\text{Ex. } \text{Arc-sin } 0.810 =$$

$$\textcircled{38} \quad \begin{array}{l} \text{Arc-cos } 0.350 = 69.5^\circ \\ \text{S} \quad \text{M} \end{array}$$

$$\text{Ex. } \text{Arc-cos } 0.810 =$$

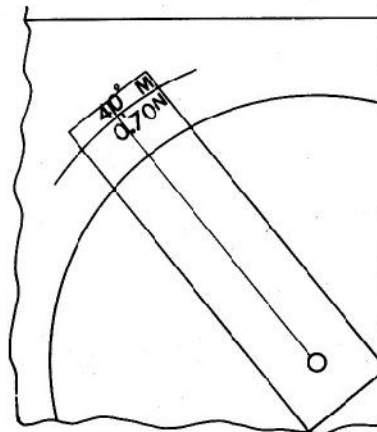


$$\textcircled{39} \quad \begin{array}{l} \text{Arc-tan } 0.350 = 19.3^\circ \\ \text{T} \quad \text{M} \end{array}$$

$$\text{Ex. } \text{Arc-tan } 0.810 =$$

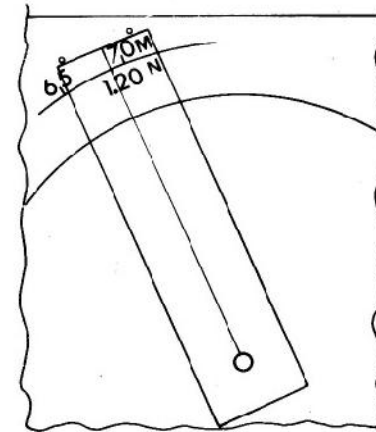
$$\textcircled{40} \quad \begin{array}{l} \text{Arc-cot } 0.350 = 70.7^\circ \\ \text{T} \quad \text{M} \end{array}$$

$$\text{Ex. } \text{Arc-cot } 0.810 =$$



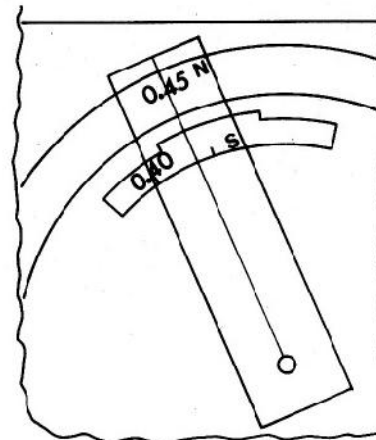
$$\textcircled{41} \quad \begin{array}{l} \text{Arc } 40^\circ = 0.698 \\ \text{M} \quad \text{N} \end{array}$$

$$\text{Ex. } \text{Arc } 22^\circ =$$



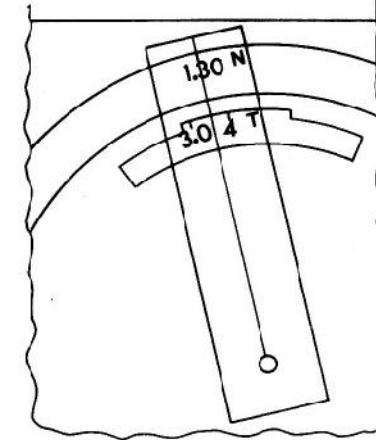
$$\textcircled{42} \quad \begin{array}{l} 1.20 \text{ rad} = 68.8^\circ \\ \text{N} \quad \text{M} \end{array}$$

$$\text{Ex. } 0.52 \text{ rad} =$$



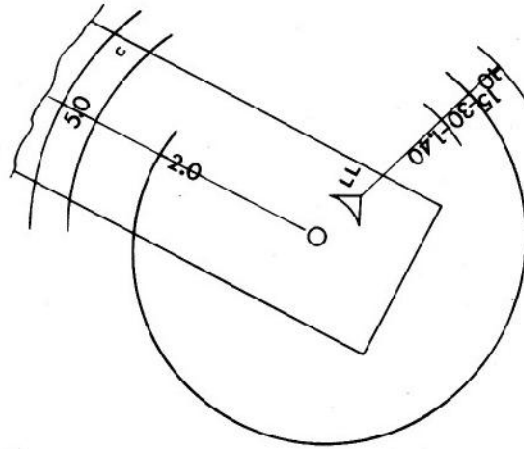
$$\textcircled{43} \quad \begin{array}{l} \sin 0.450 \text{ rad} = 0.435 \\ \text{N} \quad \text{S} \end{array}$$

$$\text{Ex. } \sin 0.226 \text{ rad} =$$



$$\textcircled{44} \quad \begin{array}{l} \tan 1.30 \text{ rad} = 3.60 \\ \text{N} \quad \text{T} \end{array}$$

$$\text{Ex. } \tan 0.65 \text{ rad} =$$



④5 $2^5 = 32$
LL c ▷ LL

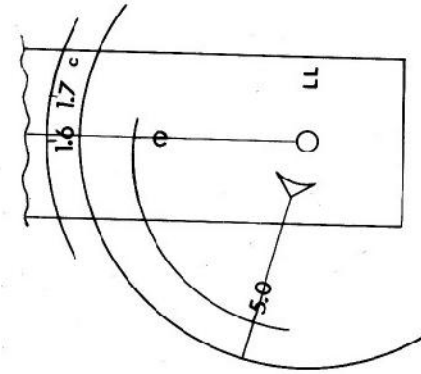
Ex. $3^2 =$

④6 $2^{50} = 10^{15}$
LL c ▷ LL

Ex. $3^{20} =$

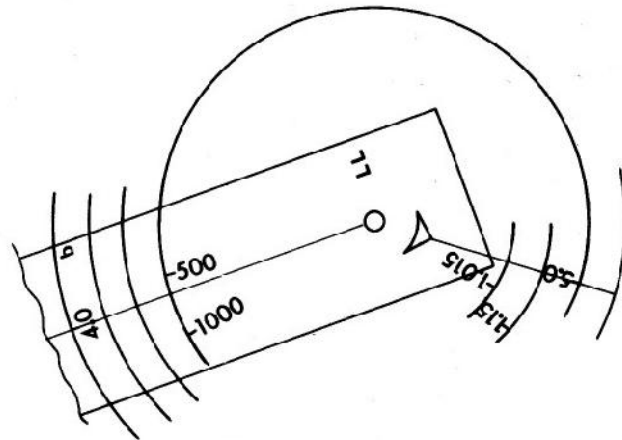
④7 $20.5 = 1.414$
LL c ▷ LL

Ex. $30.2 =$



⑤1 $e^{\log 5} = 1.61$
LL ▷ LL c

Ex. $e^{\log 7} =$



④8 $4\sqrt[4]{625} = 5$
LL
b ▷ LL

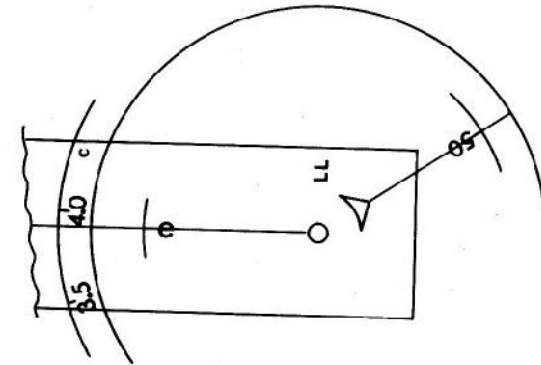
Ex. $3\sqrt[3]{150} =$

④9 $40\sqrt[40]{625} = 1.174$
LL
b ▷ LL

Ex. $30\sqrt[30]{150} =$

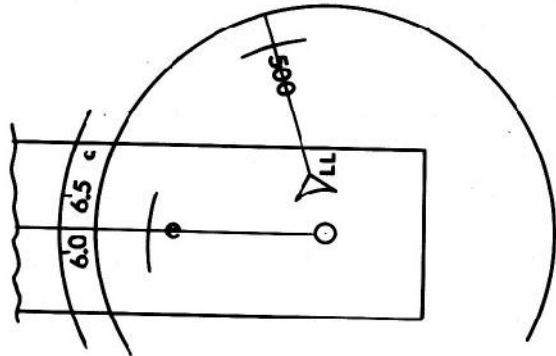
⑤0 $400\sqrt[400]{625} = 1.0162$
LL
b ▷ LL

Ex. $300\sqrt[300]{150} =$



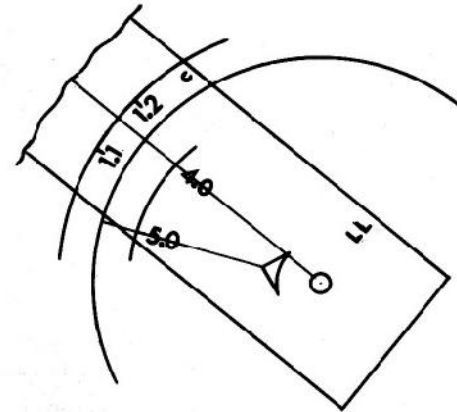
⑤2 $e^{\log 50} = 3.91$
LL ▷ LL c

Ex. $e^{\log 20} =$



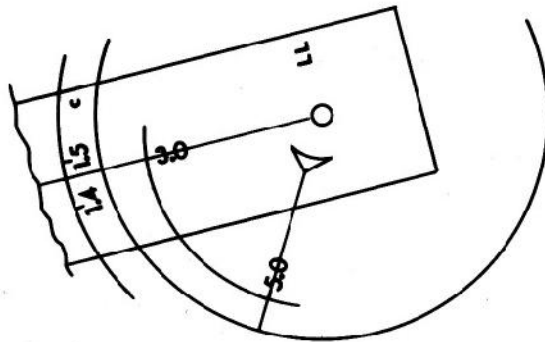
53 ${}^9\log 500 = 6.21$
 $LL \triangleright LL \quad c$

Ex. ${}^9\log 140 =$



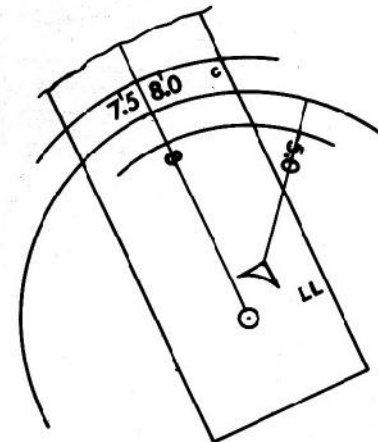
55 ${}^4\log 5 = 1.16$
 $LL \triangleright LL \quad c$

Ex. ${}^5\log 7 =$



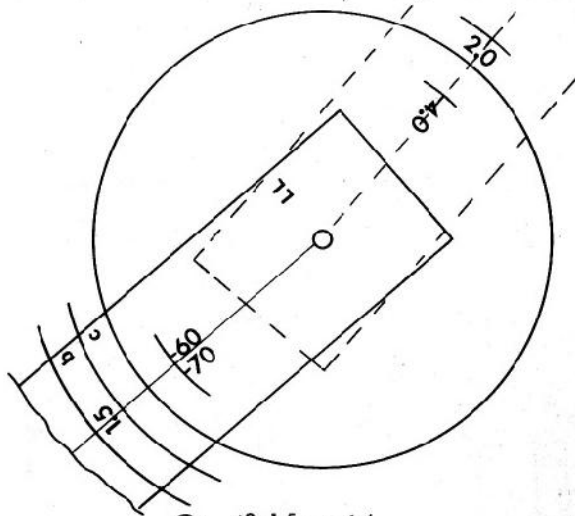
54 ${}^3\log 5 = 1.465$
 $LL \triangleright LL \quad c$

Ex. ${}^4\log 7 =$



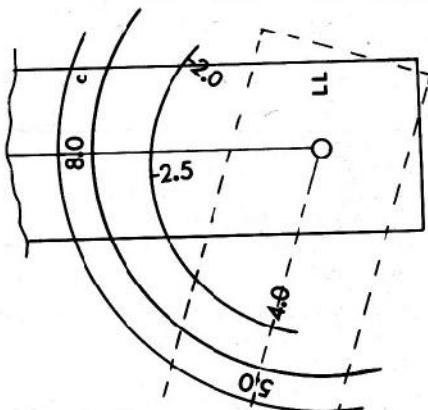
56 ${}^8\log 5 = 0.774$
 $LL \triangleright LL \quad c$

Ex. ${}^9\log 7 =$



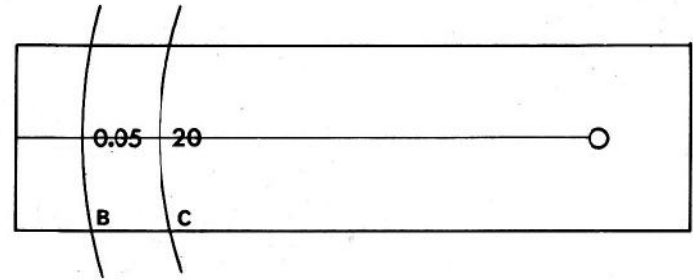
57 $42 \cdot 1.5 = 64$
 $LL_c \quad b \quad LL$

Ex. $2^{2 \cdot 4} =$



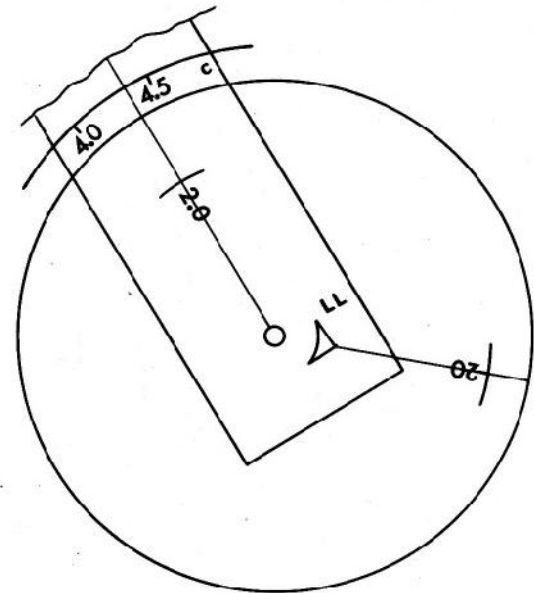
58 $4^{5/8} = 2.38$
 $LL_c \quad c \quad LL$

Ex. $7^{3/4} =$

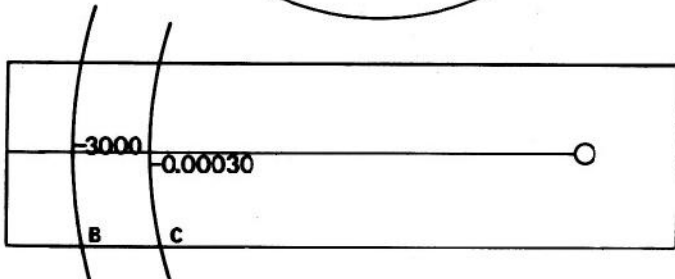
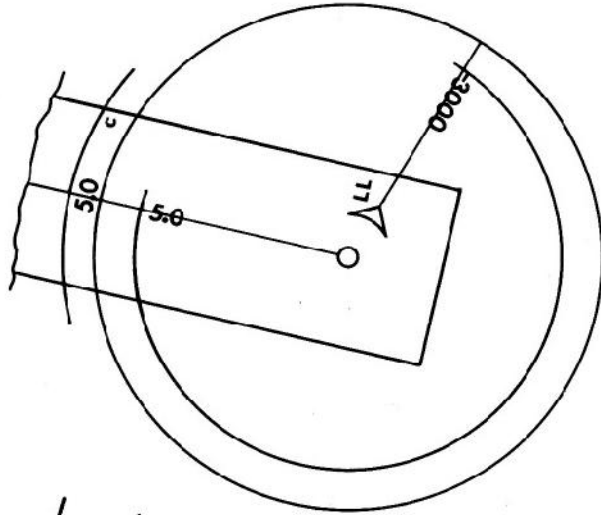
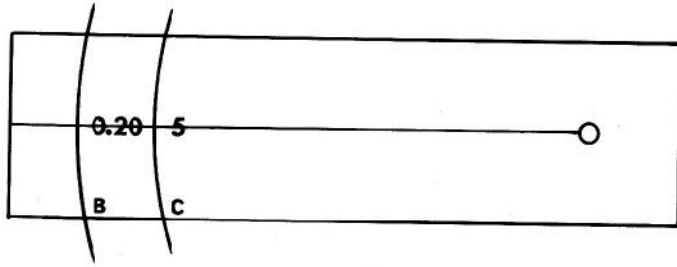


59 ${}_B^2 \log 0.05 = -{}_B^2 \log (1:0.05) = -{}_C^2 \log 20 = -4.32$
 $LL \triangleright LL_c$

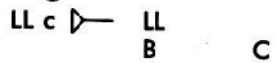
Ex. ${}_6 \log 0.025 =$



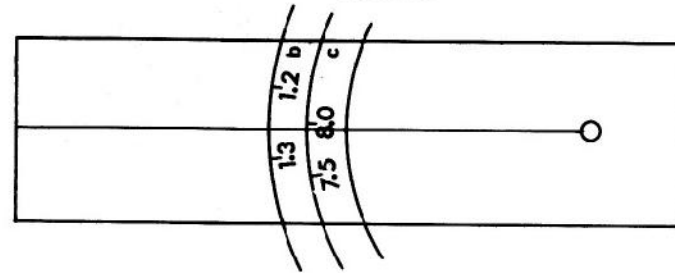
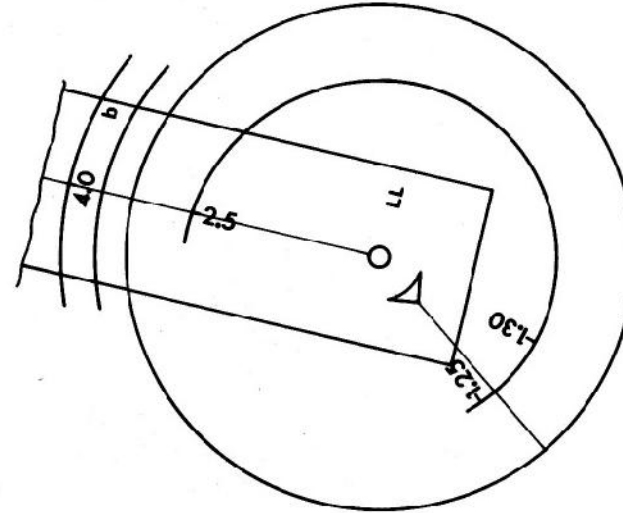
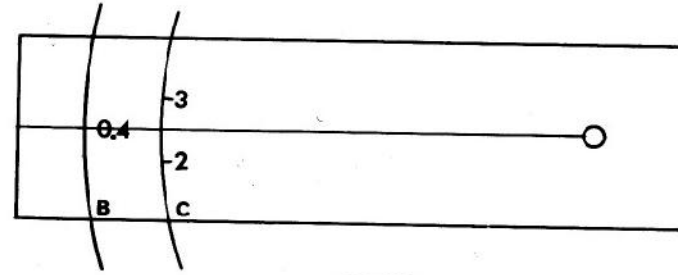
14



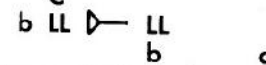
⑥① $0.2^5 = 1:(1:0.2)^5 = 1:5^5 = 1:3100 = 0.00032$



Ex. $0.4^4 =$



⑥① $0.4^3 = 1:(1:0.4)^3 = 1:3^3 = 1:27 = 0.037$



Ex. $0.5^9 =$

CONVERSION SCALES		UMRECHNUNGS-FAKTOREN	COEFFICIENTS DE CONVERSION		ANSWERS	ERGEBNISSE	RESULTATS
A	U	C V					
0.0164	lit	= 1 cu.in.	Liter	— Cubic inch	① 30	③② 5.76	
0.0254	mm	= 1 mil	Millimeter	— 1/1000 inch	② 5	③③ 0.906	
0.0283	m ³	= 1 cu.ft.	Cubic meter	— Cubic foot	③ 24	③④ 0.906	
0.0703	kg/cm ²	= 1 lb/sq.in.	Kilogram/sq.cm	— Pound/sq.inch	④ 0.8	③⑤ 2.15	
0.0929	m ²	= 1 sq.ft.	Square meter	— Square foot	⑤ 11.75	③⑥ 2.15	
0.1383	kgm	= 1 ft.lb.	Kilogram-meter	— Foot-pound	⑥ 4.40	③⑦ 54.1°	
0.2520	kcal	= 1 BTU	Kilo-calorie	— British Thermal Unit	⑦ 2 · 10 ⁹	③⑧ 35.9°	
0.3048	m	= 1 ft.	Meter	— Foot	⑧ 2.5 · 10 ⁻⁴	③⑨ 39.0°	
0.4536	kg	= 1 lb.	Kilogram	— Pound	⑨ 9	④① 51.0°	
0.5555	°K	= 1 °RANK	Kelvin	— Rankine	⑩ 3.90	④② 0.384	
0.80	°R	= 1 °C	Réaumur	— Celsius	⑪ 2.93	④③ 29.8°	
0.9144	m	= 1 yd.	Meter	— Yard	⑫ 3.47	④④ 0.224	
1.6093	km	= 1 st.mile	Kilometer	— Statute mile	⑬ 200	④⑤ 0.76	
1.852	km	= 1 nt.mile	Kilometer	— Nautical mile	⑭ 0.5	④⑥ 9	
2.54	cm	= 1 in.	Centimeter	— Inch	⑮ 700	④⑦ 3.5 · 10 ⁹	
3.7853	lit	= 1 US.Gal.	Liter	— US gallon	⑯ 3	④⑧ 1.246	
4.546	lit	= 1 Imp.Gal.	Liter	— British gallon	⑰ 2	④⑨ 5.31	
6.4516	cm ²	= 1 sq.in.	Square centimeter	— Square inch	⑱ 0.05	⑤① 1.182	
9.8067	Watt	= 1 kgm/s	Watt	— Kilogram-meter/sec.	⑲ 30 °C	⑤② 1.0168	
16.387	cm ³	= 1 cu.in.	Cubic-centimeter	— Cubic inch	⑳ 20 ft	⑤③ 1.95	
28.35	g	= 1 oz.	Gram	— Ounce	㉑ 25	⑤④ 3.00	
36.00	km/h	= 1 m/0.1 s	Kilometer/hour	— Meter/0.1 second	㉒ 125	⑤⑤ 4.94	
68.1818	MPH	= 1 ft/0.01 s	Mile per hour	— Foot/0.01 second	㉓ 2.45	⑤⑥ 1.4	
107.5140	kgm	= 1 BTU	Kilogram-meter	— British Thermal Unit	㉔ 2.76	⑤⑦ 1.21	
367.098	kgm	= 1 Watt-Hour	Kilogram-meter	— Watt-hour	㉕ 9.8	⑤⑧ 0.885	
426.65	kgm	= 1 kcal	Kilogram-meter	— Kilo-calorie	㉖ 1.75	⑤⑨ 256	
907.18	kg	= 1 US.sh.ton.	Kilogram	— US short ton	㉗ 5.45	⑥① 4.30	
1016.0	kg	= 1 Br.lg.ton.	Kilogram	— British long ton	㉘ 9.6	⑥② -2.06	
2831.67	lit	= 1 Reg.ton.	Liter	— Register ton	㉙ 22.4	⑥③ 0.026	
4046.9	m ²	= 1 acre	Square meter	— Acre	③① 0.845	⑥④ 0.926	
	°F	= 1,8°C + 32	Fahrenheit	— Celsius			

ABC slide rule - DIRECT READ-OUT of Decimal point location - easy as ABC.

ABC-Rechner - DIREKTABLESUNG der Dezimalkommastelle - leicht wie das ABC.

Calculateur ABC - LECTURE DIRECTE du placement de la virgule des Décimales - aussi facile que l' ABC.

Il regolo calcolatore ABC - con la LETTURA DIRETTA della posizione della virgola dei Decimali - è semplice come l' ABC.

Regla de cálculo ABC - LECTURA DIRECTA de la coma Decimal - tan fácil como ABC.

ABC räknesticka - DIREKT AVLÄSNING av Decimalkommats placering - lätt som ABC.



Rechenschieberfabrik F. Riehle KG., 73 Esslingen am Neckar, W. Germany.

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