

- Remember : while calculating division problems of log.
- ① If numerator is greater than denominator, the difference of log value will be positive.
 - ② If numerator is less than denominator, the difference of log value will be negative.

$$\textcircled{a} \text{ calculate } = \frac{180}{15}$$

→ ∴ by taking log.

$$\begin{array}{r|l} \log \left(\frac{180}{15} \right) & = \log 180 - \log 15 \\ & = 2.2553 - 1.1761 \\ & = 1.0792 \end{array}$$

$$\log \left(\frac{180}{15} \right) = 1.0792$$

$$\text{Antilog } 1.0792 = 12.00$$

$$\therefore \frac{180}{15} = 12.00$$

Or 12

$$\begin{array}{r} 1199 \\ + \quad 1 \\ \hline 1200 \end{array}$$

⑩ Calculate : $\frac{180}{15.41}$

→ by taking log

$\log \left(\frac{180}{15.41} \right)$	=	$\log 180 - \log 15.41$		2.2553
	=	$2.2553 - 1.1878$	-	1.0675
$\log \left(\frac{180}{15.41} \right)$	=	1.0675		1.0675

Antilog 1.0675	=	11.68		1167
			+	1
$\therefore \frac{180}{15.41}$	=	11.68		1168

⑪ Calculate $\left(\frac{441}{237} \right)$

→ By taking log.

$\log \left(\frac{441}{237} \right)$	=	$\log 441 - \log 237$		2.6444
	=	$2.6444 - 2.3747$	-	0.2697
$\log \left(\frac{441}{237} \right)$	=	0.2697		0.2697

Antilog 0.2697	=	1.861		1858
			+	3
$\therefore \frac{441}{237}$	=	1.861		1861

⑫ Calculate $\frac{23.14}{14.61}$

→ By taking log.

$\log \left(\frac{23.14}{14.61} \right)$	=	$\log 23.14 - \log 14.61$		1.3643
	=	$1.3643 - 1.1647$	-	0.1996
$\log \left(\frac{23.14}{14.61} \right)$	=	0.1996		0.1996

Antilog 0.1996	=	1.583		
				1.581
			+	2
$\therefore \frac{23.14}{14.61}$	=	1.583		1.583

⑬ Calculate : $\frac{768}{331}$

→ by taking log.

$\log\left(\frac{768}{331}\right)$	=	$\log 768 - \log 331$		2.8854
	=	$2.8854 - 2.5198$	-	2.5198
$\log\left(\frac{768}{331}\right)$	=	0.3656		0.3656

Antilog 0.3656	=	2.320		2317
			+	3
$\therefore \frac{768}{331}$	=	2.320		2320

⑭ Calculate : $\frac{139}{89}$

→ by taking log.

$\log\left(\frac{139}{89}\right)$	=	$\log 139 - \log 89$		2.1430
	=	$2.1430 - 1.9494$	-	1.9494
$\log\left(\frac{139}{89}\right)$	=	0.1936		0.1936

Antilog 0.1936	=	1.562		1560
			+	2
$\therefore \left(\frac{139}{89}\right)$	=	1.562		1562