

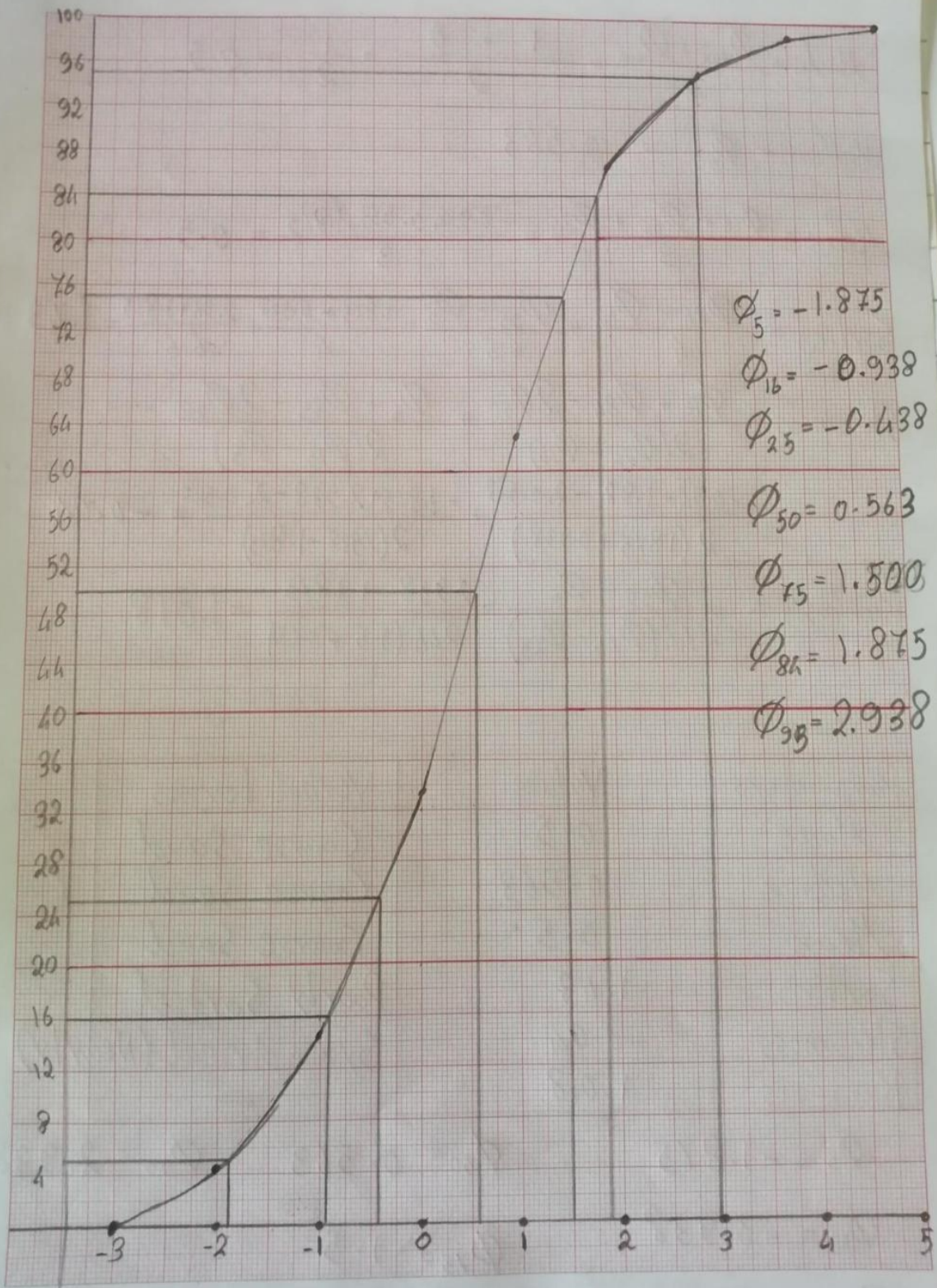
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Sample: LCD 22

Raw	$\Phi$	I.wt%	C.wt%
0	-4 — -3	0	0
4.09	-3 — -2	4.12	4.12
10.56	-2 — -1	10.6	14.7
18.69	-1 — 0	18.8	33.6
29.375	0 — 1	29.6	63.1
23.575	1 — 2	23.7	86.9
8.77	2 — 3	8.38	95.7
3.06	3 — 4	3.08	98.8
1.21	4 — 5	1.22	100.0

Mean = 0.5  
Sorting = 1.43

→ Channel Environment



$$\text{Mode} = \frac{\phi_{\text{max}} + \phi_{\text{min}}}{2} = \frac{1 + 0}{2} = \frac{1}{2} = 0.5$$

$$\text{Median} = \phi_{50} = 0.563$$

$$\text{Mean} = \frac{\phi_{16} + \phi_{50} + \phi_{84}}{3} = \frac{-0.938 + 0.563 + 1.875}{3} = 0.5$$

$$\text{Sorting} = \frac{\phi_{84} - \phi_{16}}{4} + \frac{\phi_{95} - \phi_5}{6.6} = \frac{1.875 + 0.938}{4} + \frac{2.94 + 1.875}{6.6} = 1.43$$

$$\begin{aligned} \text{Skewness} &= \frac{\phi_{16} + \phi_{84} - 2\phi_{50}}{2(\phi_{84} - \phi_{16})} + \frac{\phi_5 + \phi_{95} - 2\phi_{50}}{2(\phi_{95} - \phi_5)} \\ &= \frac{-0.94 + 1.88 - 2 \times 0.563}{2(1.875 + 0.938)} + \frac{-1.875 + 2.938 - 2 \times 0.563}{2(2.938 - 1.875)} = -0.04 \end{aligned}$$

$$\text{Kurtosis} = \frac{\phi_{95} - \phi_5}{2.44(\phi_{75} - \phi_{25})} = \frac{2.938 + 1.875}{2.44(1.5 + 0.644)} = 1.018$$

Parameters	Values	Verbal terms
Mode	0.5	Coarse sand
Median	0.563	Coarse sand
Mean	0.5	Coarse sand
Sorting	1.43	Poorly sorted
Skewness	-0.04	Symmetrical (Nearly)
Kurtosis	1.018	—

$$\phi_5 = -1.875 \quad \phi_{50} = 0.563 \quad \phi_{95} = 2.938$$

$$\phi_{16} = -0.938 \quad \phi_{75} = 1.5$$

$$\phi_{25} = -0.638 \quad \phi_{84} = 1.875$$