To find volume of a cylinder using Vernier Callipers.

Observations & Calculations:

Value of the smallest scale division = x = 0.1 cm
No. of divisions on vernier scale = y = 10
Vernier constant (V. C.) = x/y = 0.1/10 = 0.01 cm
Zero error = i) ± zero ii) ± zero ii) ± zero
Mean zero error = nil
Zero correction = nil

No. of obs.	Quantity to be measured	Main Scale Reading	Vernier Scale Division Coinciding with any main scale division	Fraction to be added	Total Reading
		x_1	n	$\Delta x = n \times V.C.$	$x = x_1 + \Delta x$
		cm		cm	cm
1	Length	3.8	5	.05	3.85
2		3.9	1	.01	3.91
3		3.8	4	.04	3.84
1	Diameter	1.2	3	.03	1.23
2		1.2	3	.03	1.23
3		1.2	4	.04	1.24

Mean length of cylinder = L = 11.6/3 = 3.86 cm
Mean diameter of cylinder = D = 3.69/3 = 1.23 cm
Radius of the cylinder = R = D/2 = 0.62 cm
Volume of the cylinder = $V = \pi R^2 L = 4.599\ cm^3$