

HARMONIC MEAN : DISCRETE SERIES

Q. Age in years: 50 51 52 53 54 55
No. of persons: 2 4 10 6 2 2

Solution

Age (x)	No. of persons (f)	Reciprocal ($\frac{1}{x}$)	$f(\frac{1}{x})$
50	2	0.02000	0.04000
51	4	0.01961	0.07844
52	10	0.01923	0.19230
53	6	0.01887	0.11322
54	2	0.01852	0.03704
55	2	0.01818	0.03636
$\Sigma f = 26$		$\Sigma f(\frac{1}{x}) = 0.49736$	

$$\therefore \text{H.M.} = \left\{ \frac{\Sigma f(\frac{1}{x})}{n} \right\} \text{ of Reciprocal.}$$

$$= \text{Reciprocal of } \left(\frac{0.49736}{26} \right)$$

$$= \text{Reciprocal } 0.01913$$

$$= 52.28 \text{ } \underline{\hspace{1cm}}$$

Note- When we calculate in continuous series we do same as discrete series. there (x) is the mid value = $\frac{l_1 + l_2}{2}$.