

Calculation of Percentile Rank (PR)

Formula
$$PR = \frac{c.f_p + \frac{i}{f_a}(X-L)}{N} \times 100$$

Given - Score

Steps :- (1) Find c.f.

(2) Find N

(3) Find the C.I in which the given score lies.

(4) Find c.f.p

(5) Find f_a

(7) Apply formula.

Ques. Find PR for the scores, 42, 72 from the data given below.

C.I	75-79	70-74	65-69	60-64	55-59	50-54	45-49	40-44	35-39
f	3	5	4	6	7	9	6	5	3

C.I वर्गान्तर	f आवृत्तियाँ	C.f.	i) PR for <u>42</u>
74.5 - 79.5	3	50	42 lies in (39.5 - 44.5)
69.5 - 74.5	5	47	
64.5 - 69.5	4	42	$PR = \frac{C.f.p + \frac{l}{f_a}(x-L)}{N} \times 100$
59.5 - 64.5	6	38	$= 5 + \frac{5}{5}(42-39.5)$
54.5 - 59.5	7	32	$= \frac{50}{5} \times 2$
49.5 - 54.5	9	25	$= [5 + (2.5)] \times 2$
44.5 - 49.5	6	16	$= 7.5 \times 2$
39.5 - 44.5	$f_a(5)$	10	
34.5 - 39.5	3	5	$C.f.p = 42 \Rightarrow 15$
29.5 - 34.5	2	2	
$N = 50$			$PR_{42} = 15$

(ii) $X = 72$

72 lies in C.I (69.5 - 74.5)

$$PR = \frac{C.f.p + \frac{l}{f_a}(x-L)}{N} \times 100$$

$$= \frac{42 + \frac{5}{5}(72-69.5)}{50} \times 100$$

$$= (42 + 2.5) \times 2$$

$$= 44.5 \times 2$$