

# Quartiles, Deciles and Percentiles

Data Science and A.I. Lecture Series

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PostNetwork Academy

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From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$		
58		
59		
60		
61		
62		
63		
64		
65		
66		

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62	10	
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	N=50	

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$x_i$	$f_i$	C. F.
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$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	
62	10	
63	5	
64	4	
65	3	
66	1	
	N=50	

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$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
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61	15	26
62	10	
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$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	
64	4	
65	3	
66	1	
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$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	
65	3	
66	1	
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$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

From the following data compute the values of quartiles.

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$x_i$	$f_i$	C. F.
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65	3	48
66	1	50
	N=50	

Computing  $D_3$  :



From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
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59	3	5
60	6	11
61	15	26
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63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

Cumulative frequency just greater than 15 is 26, and the corresponding value of the variable is 61.

From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

Cumulative frequency just greater than 15 is 26, and the corresponding value of the variable is 61.

Third Decile  $D_3=61$

From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

Cumulative frequency just greater than 15 is 26, and the corresponding value of the variable is 61.

Third Decile  $D_3=61$

Computing  $D_7$ :

From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

Cumulative frequency just greater than 15 is 26, and the corresponding value of the variable is 61.

Third Decile  $D_3=61$

Computing  $D_7$ :

We have,  $\frac{7N}{10} = \frac{7 \times 50}{10} = 35$

From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

Cumulative frequency just greater than 15 is 26, and the corresponding value of the variable is 61.

Third Decile  $D_3=61$

Computing  $D_7$ :

We have,  $\frac{7N}{10} = \frac{7 \times 50}{10} = 35$

Cumulative frequency just greater than 35 is 41, and the corresponding value of the variable is 64.

From the following data compute the values of quartiles.

$x_i$	58	59	60	61	62	63	64	65	66
$f_i$	2	3	6	15	10	5	4	3	1

$x_i$	$f_i$	C. F.
58	2	2
59	3	5
60	6	11
61	15	26
62	10	36
63	5	41
64	4	45
65	3	48
66	1	50
	N=50	

Computing  $D_3$  :

We have,  $\frac{3N}{10} = \frac{3 \times 50}{10} = 15$

Cumulative frequency just greater than 15 is 26, and the corresponding value of the variable is 61.

Third Decile  $D_3=61$

Computing  $D_7$ :

We have,  $\frac{7N}{10} = \frac{7 \times 50}{10} = 35$

Cumulative frequency just greater than 35 is 41, and the corresponding value of the variable is 64.

Seventh decile  $D_7 = 64$ .