

x	f
0-4	12
5-9	16
10-14	23
15-19	17
20-24	10

How can I estimate the 40th value in this grouped frequency table?

x	f
0-4	12
5-9	16
10-14	23
15-19	17
20-24	10

Which group is the 40th value in?

The 40th value is in the 3rd group.

x	f
0-4	12
5-9	16
10-14	23
15-19	17
20-24	10

How many values are there before the 3rd group?

There are 28 values before the 3rd group.

x	f
0-4	12
5-9	16
10-14	23
15-19	17
20-24	10

How far into the 3rd group is the 40th value?

$40 - 28 = 12$
It is the 12th value in the 3rd group.
It is $12/23$ of the way into the 3rd group.

x	f
0-4	12
5- 9	16
10 -14	23
15-19	17
20-24	10

Where does the 3rd group start?

The lower class boundary of the 3rd group is 9.5

x	f
0-4	12
5-9	16
10-14	23
15-19	17
20-24	10

How wide is the 3rd group?

The class width of the 3rd group is 5.

x	f
0-4	12
5-9	16
10-14	23
15-19	17
20-24	10

What is the estimate of the 40th value?

$9.5 + 12/23 \text{ of } 5$

12.1