Cumulative Frequency Polygon

You use these for a set of *continuous* data to show how the data grows

You must know the <u>CUMULATIVE FREQUENCY</u> before you can draw one

Cumulative frequency is the total frequency up to and including a particular data point

You plot the data (x axis) against the cumulative frequency (y axis) then join the plotted points together with a smooth curve

A Cumulative Frequency Polygon can be used for:

✓ Continuous Data

1. For each of the tables below calculate the cumulative frequency:

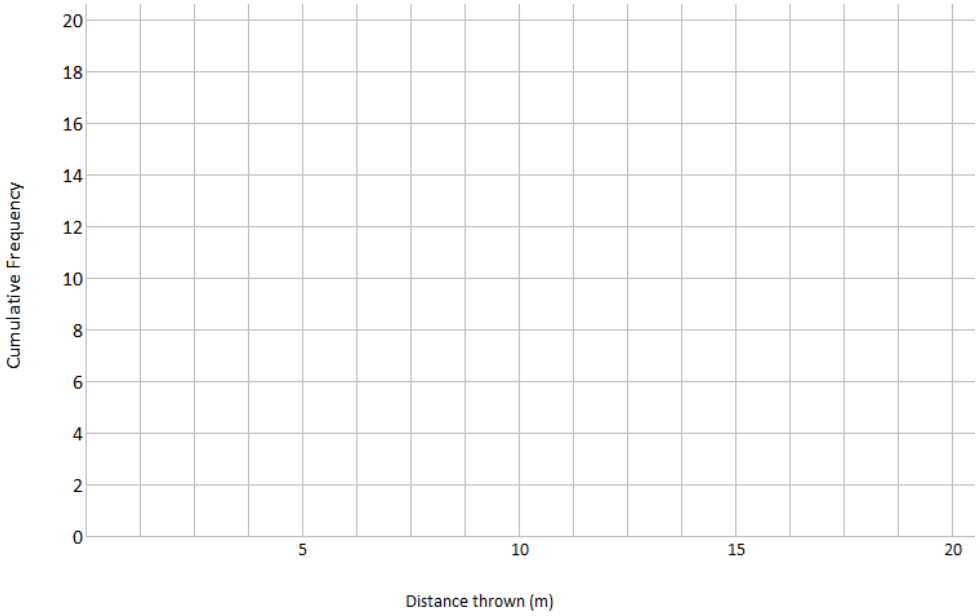
a)

X	0≤x<5	5≤x<10	10≤x<15	15≤x<20
F	7	5	3	4
C.F				

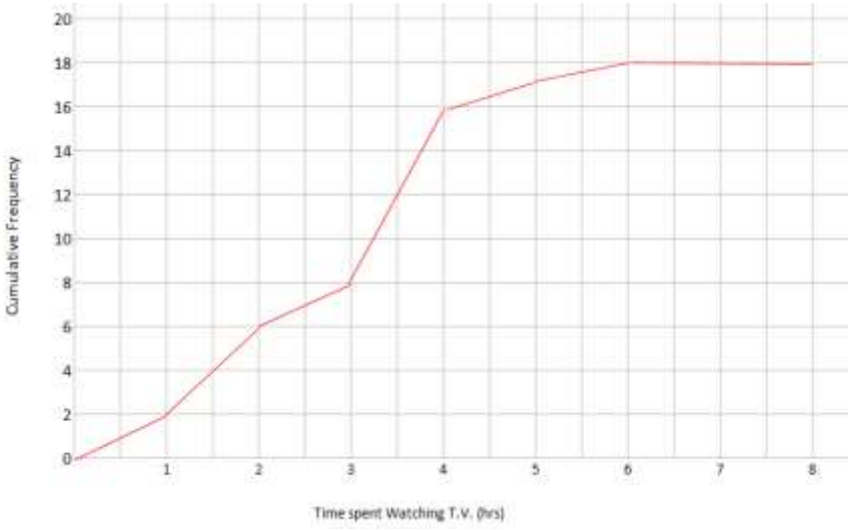
b)

X	0≤x<10	10≤x<20	20≤x<30	30≤x<40
F	7	4	1	5
C.F				

2. For table 1. a), draw a cumulative frequency polygon on the grid below



3. Use the cumulative frequency polygon below to answer the following questions



a) How many people were asked about the number of hours they spent watching T.V? _____

b) How many people watched T.V for less than 3.5 hours? _____

c) How many people watched T.V for more than 1.5 hours? _____

d) 7 people watched T.V for less than _____ hours

Solutions

1. For each of the tables below calculate the cumulative frequency:

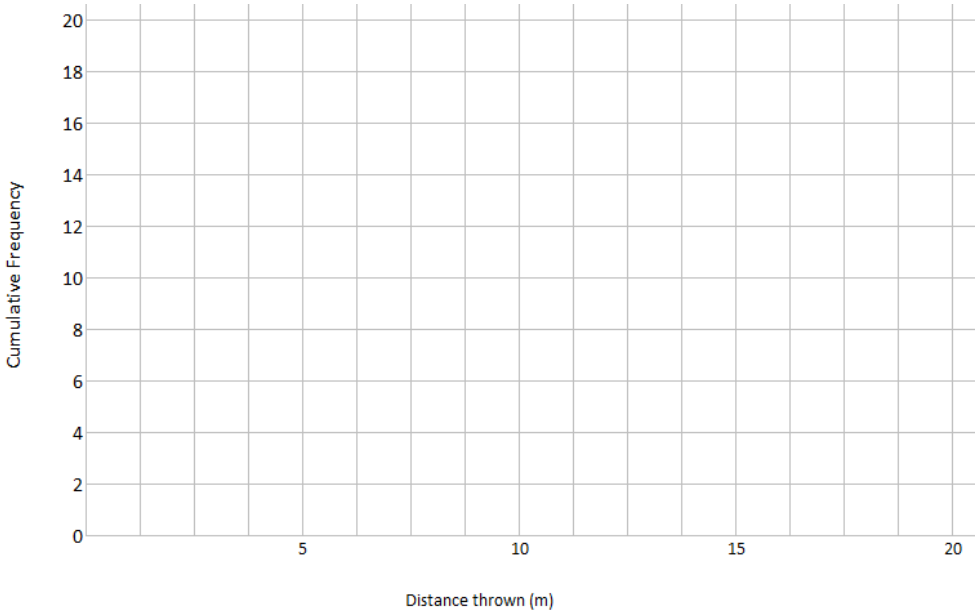
a)

X	0≤x<5	5≤x<10	10≤x<15	15≤x<20
F	7	5	3	4
C.F	7	12	15	19

b)

X	0≤x<10	10≤x<20	20≤x<30	30≤x<40
F	7	4	1	5
C.F	7	11	12	17

2. For table 1. a), draw a cumulative frequency polygon on the grid below



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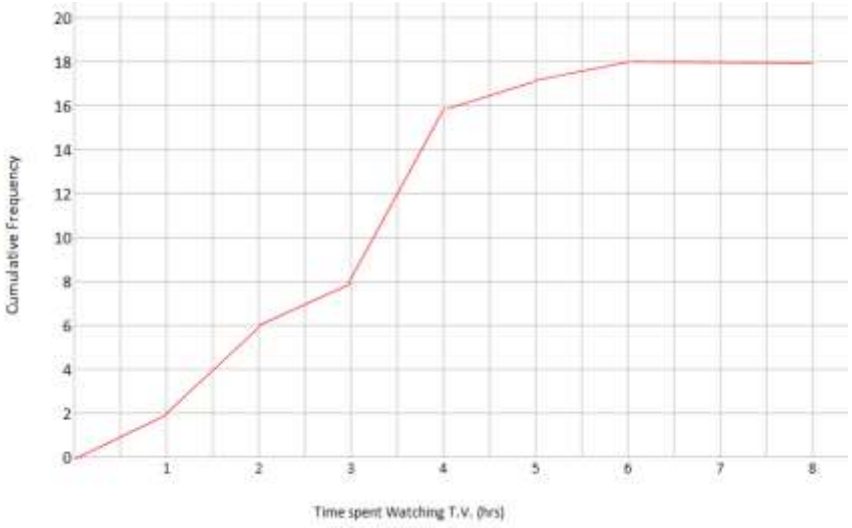

a) How many people were asked about the number of hours they spent watching T.V?

18

b) How many people watched T.V for less than 3.5 hours?

12

c) How many people watched T.V for more than 1.5 hours?

14

d) 7 people watched T.V for less than 2.5 hours