

Lesson 60 – Working With Ogives | IB STUDIES 2

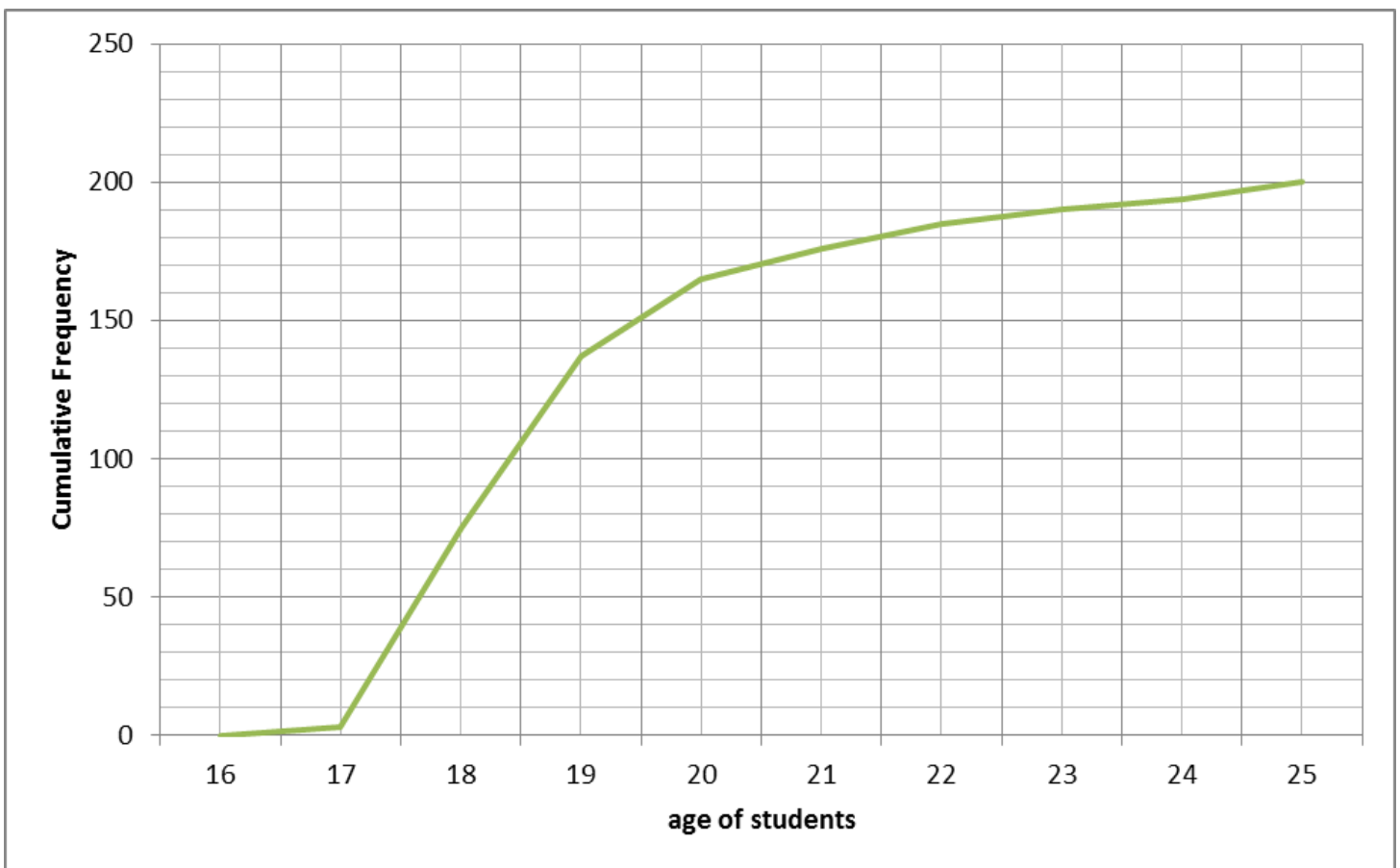
(A) Lesson Objectives

- Prepare ogives from frequency distribution tables
- Work with prepared ogives and determine measures of central tendency and spread

(B) Example #1 – FDT of ages of 200 first year college students at Juan Fine University

- Determine mean, median, mode from data table
- Determine the min, max, Q1, Q2, Q3, Q5 and IQR from the data table
- Now, show how to determine the min, max, Q1, Q2, Q3 and IQR from the ogive
- Determine the age of the student in the 65th percentile (according to the ogive)
- A student who is 19 $\frac{3}{4}$ years old is in what percentile (according to the ogive)

age of students	number	cum. Freq.
16	0	
17	3	
18	72	
19	62	
20	28	
21	11	
22	9	
23	5	
24	4	
25	6	

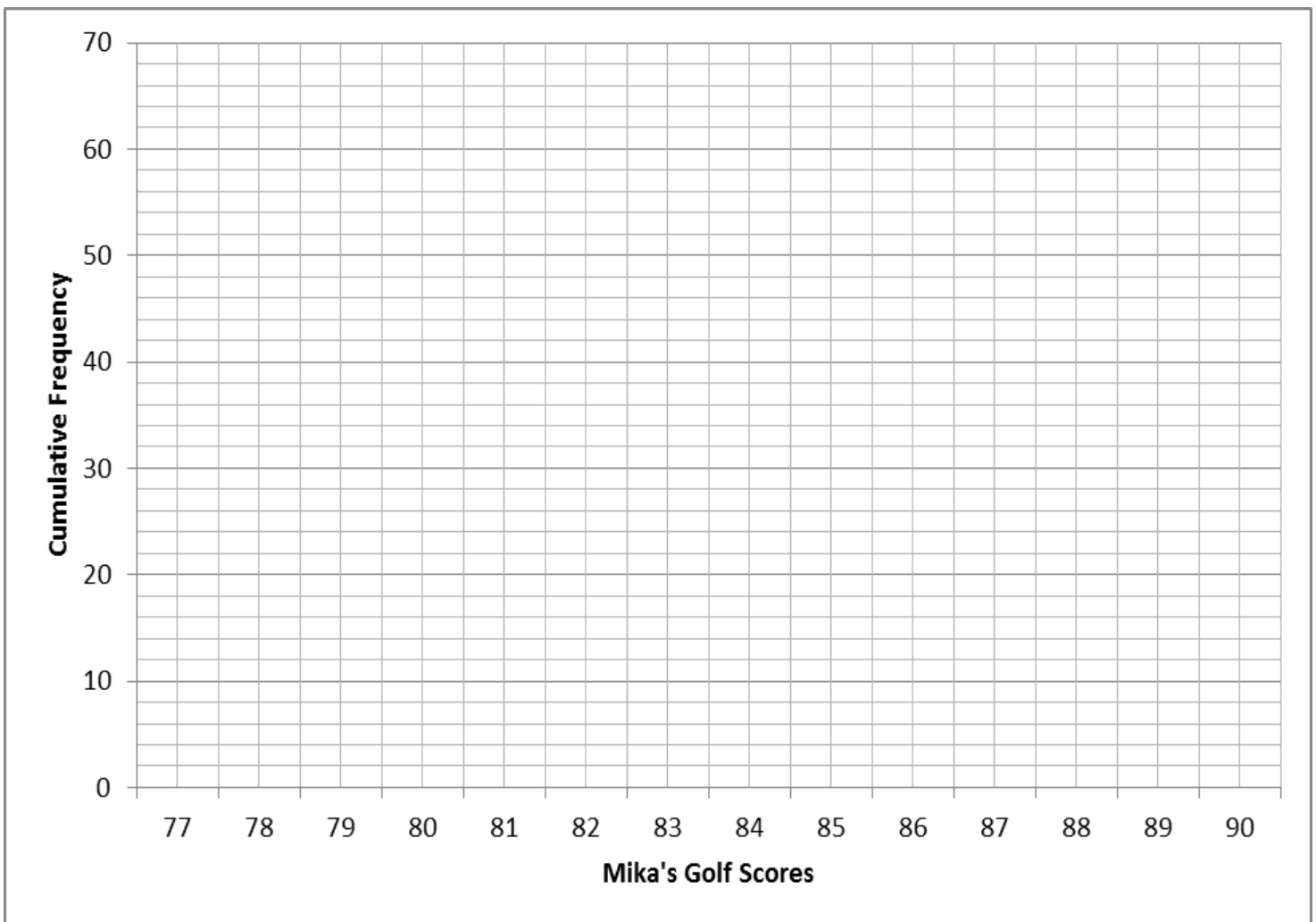


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(C) Example #2 – Mika’s golf scores this past summer

- Determine mean, median, mode from data table
- Determine the min, max, Q1, Q2, Q3, Q5 and IQR from the data table
- Now, show how to determine the min, max, Q1, Q2, Q3 and IQR from the ogive
- What score represents the 20th percentile (according to the ogive)

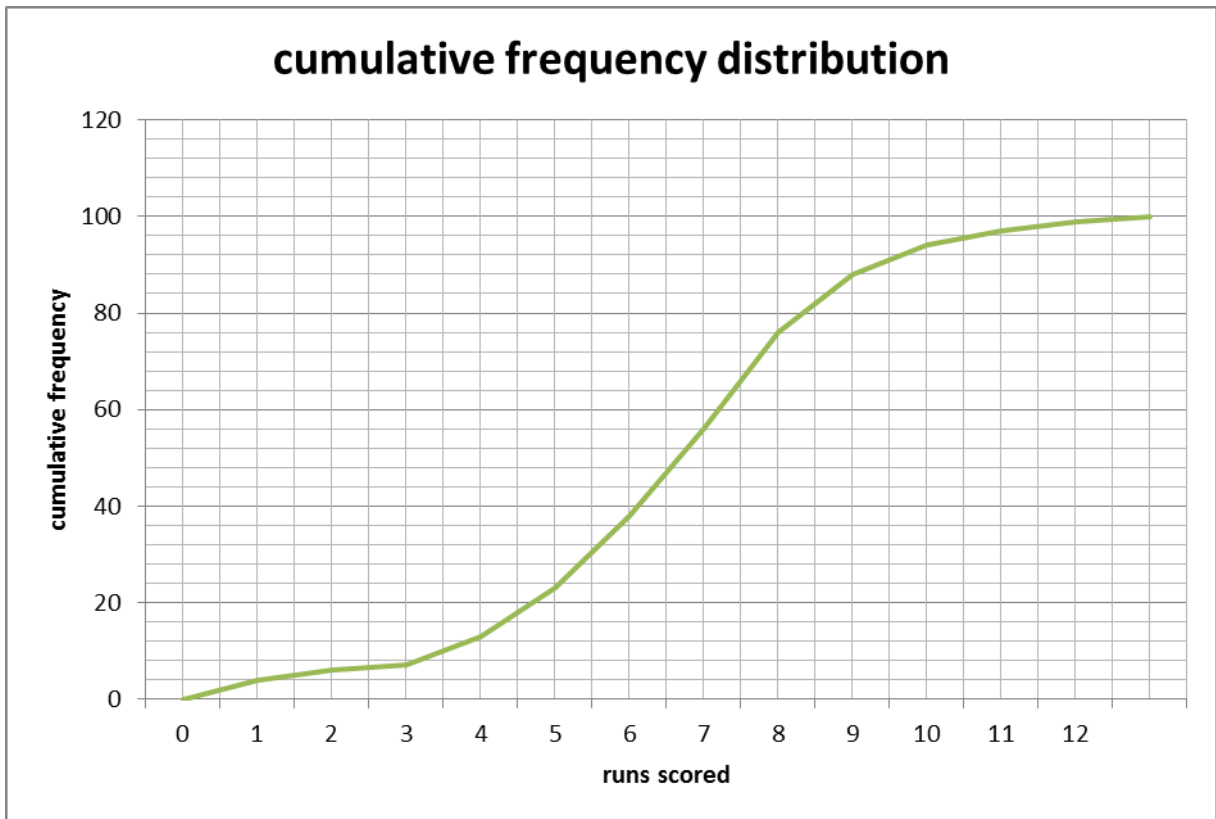
Mika's Golf Scores	number	cum. Freq.
77	0	
78	1	
79	3	
80	0	
81	5	
82	7	
83	8	
84	9	
85	10	
86	8	
87	7	
88	3	
89	2	
90	1	



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(D) Example #3 – Runs scored by Mr. Nicols baseball teams at ISM over the years

- Determine the min, max, Q1, Q2, Q3 and IQR from the ogive
- 43% of the time, Mr. Nicol’s baseball teams scored runs (according to the ogive)

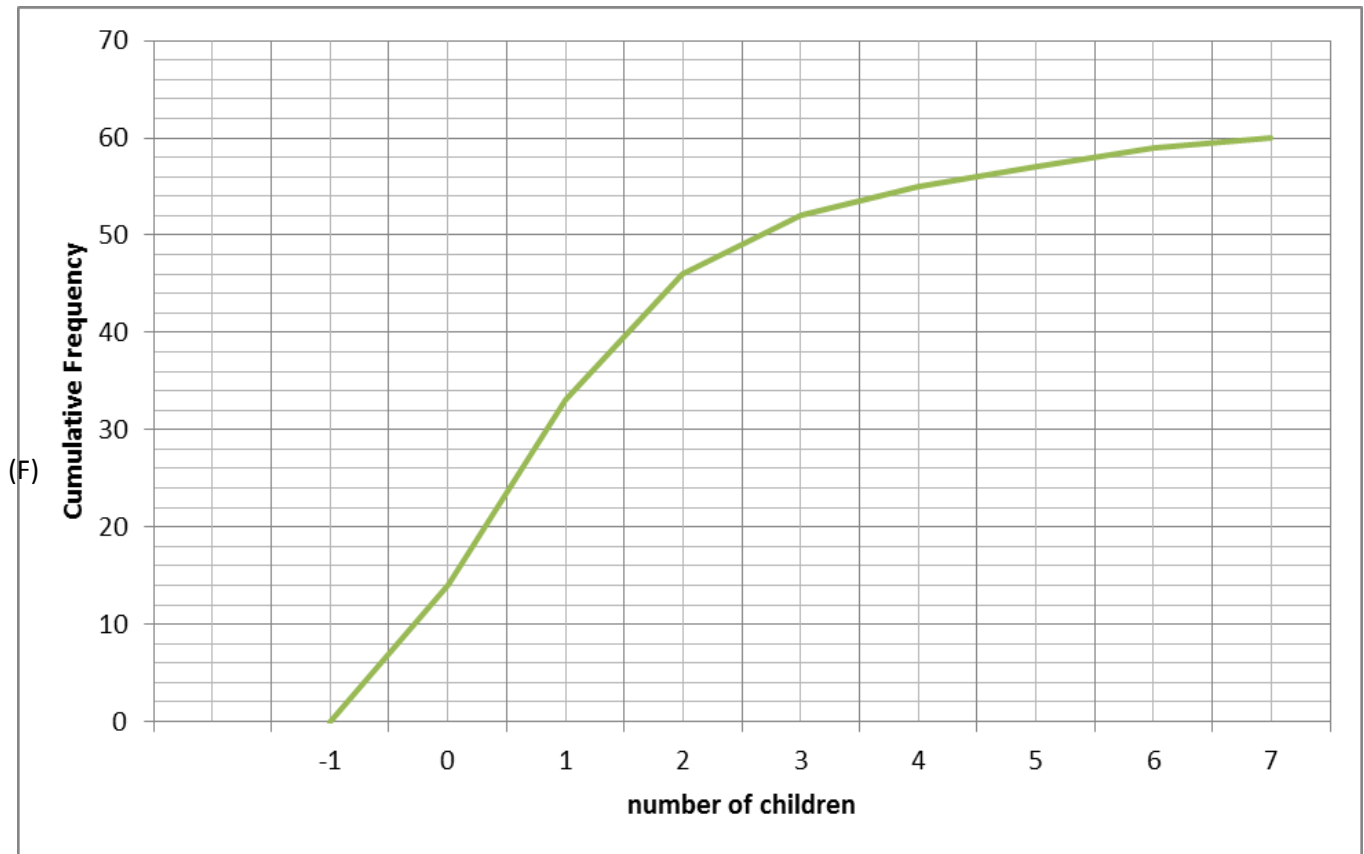


Runs in Baseball Game	number	cum. Freq.
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

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(E) Example #4 – siblings of students in Mr. S’s Grade 10 classes

- Determine the min, max, Q1, Q2, Q3 and IQR from the ogive
- 38% of the time, Mr S’s classes have students (according to the ogive)

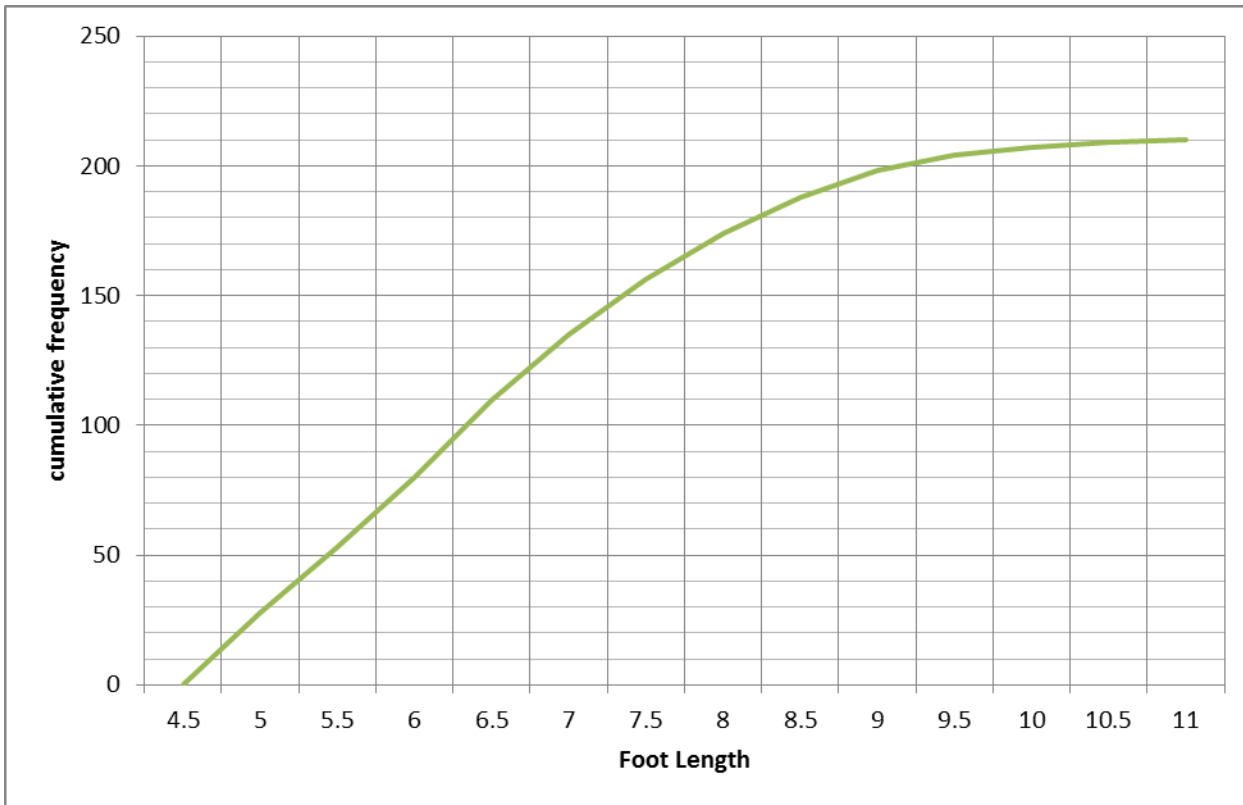


Number of children	number	cum. Freq.
-1	0	0
0		
1	19	
2		46
3		
4		55
5	2	
6		
7		60
8	0	60

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(G) Example #5 – Foot size at Payless Shoe Store for Friday sales during Foot Fetish Fridays

- Determine the min, max, Q1, Q2, Q3 and IQR from the ogive
- % of the customers had at least a size 8
- 83% of the customers had at least a size (according to the ogive)



Foot Length	number	cum. Freq.
4.5	0	0
5		28
5.5	25	
6		80
6.5		
7	25	135
7.5		156
8	18	174
8.5	14	
9		
9.5		
10	3	207
10.5		209
11	1	210

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(H) Example #2 – Mika's golf scores this past summer

Mika's Golf Scores	number	cum. Freq.
77	0	0
78	1	1
79	3	4
80	0	4
81	5	9
82	7	16
83	8	24
84	9	33
85	10	43
86	8	51
87	7	58
88	3	61
89	2	63
90	1	64

