Exercise # 2

Q1.A study was conducted in which they measured incidental intracranial aneurysms (IIAs) in 159 patients .The researchers examined complications and concluded that IIAs can be safely treated without causing mortality and with a lower complications rate than previously reported.

The following table represent the sizes (in millimeters) of the 159 IIAs in the sample:

IIAs size	frequency	Cumulative Frequency	Relative frequency	Cumulative Relative Frequency	Percentage frequency
0 - 4	29		0.182		
5 - 9	87		---0.547---		
10 - 14	--26---		0.163		
15 - 19	10	---152---	0.0629		
20 - 24	4		0.025		---2.5%--
25 - 29	1		0.006		
30 - 34	2		0.013	--1-	
Total	--159----				

Complete the table , then answer the following questions

1. **The variable is ……IIAs size….. , the type of variable is Quantitative-continues ..**
2. **The number of patient with IIAs size between 10 – 14 is ……26……….**
3. **The number of patient with IIAs size less than or equal 19 is ……152…**
4. **The relative frequency patient with IIAs size between 5 - 9 is …0.547…**
5. **The proportion of patient with IIAs size less than 15 is …0.893……..**
6. **The percentage of patient with IIAs size between 15 – 29 is…9.39%…**
7. **The true class interval of (20 – 24) is …19.5-24.5….**
8. **Width is ………5…………**
9. **Maximum value is ………34………….**

Q2: The following table shows the number of hours 45 hospitals patients slept following the administration of a certain anesthetic .

True Class interval	Frequency	Midpoint
0.5 – 5.5	21	
5.5 – 10.5	16	--8--
-10.5 – 15.5--	-6-	
15.5 – 20.5	2	
Total	45	

Answer the following questions:

1. The variable is **number of hours patients slept following the administration of a certain anesthetic** The type of variable is ………**discrete**………..
2. The sample size is ………**45**………..
3. The midpoint for the interval 5.5 – 10.5 is ……………**8**…………..
4. The number of patients spend less than or equal 15.5 hour is ………**43**……..
5. The relative frequency of patients spend between 0.5 -10.5 hour is …**0.822**……..
6. The class interval for the true class interval (5.5 – 10.5) is

   ………**6-10**……… (where $\frac{d}{2}$ =0.5)
7. The percentage of patients spend more than 10.5 hour is ……**17.78%**…..
8. Width is ……**5**…….

H.W

In a study of physical endurance of male college freshman , The following table show the composite endurance scores based on 155 exercise routines were collected

endurance scores	frequency	Relative frequency
115 – 134	6	0.039
135 – 154	7	0.045
155 – 174	--16--	0.103
175 – 194	31	0.200
195 – 214	37	--0.239--
215 - 234	--28--	0.181
235 – 254	18	0.116
255 – 275	8	0.052
275 – 294	3	0.019
295 - 314	1	0.006
Total	--155--	1

Answer the following questions :

1. The variable is … **endurance scores** …... The type of variable is ………**Continues**………..
2. The population is …**All** male college freshman …..
3. The midpoint for the interval 195-214 is ……**204.5**……….
4. The number of males with endurance score more than or equal 235 is ……**30**……..
5. The proportion of males with endurance score between 155 - 234 is …**0.723**……..
6. The true class interval for class interval (215 - 234) is …**214.5 – 234.5**…….
7. The percentage of males with endurance score between (275 – 294) is …**1.9%**……..
8. Width is ……**20**…..
9. Minimum value is ………**115**………..

**Q3:** For a sample of patients, we obtain the following graph for approximate hours spend without pain after certain surgery .

Hours spent without pain
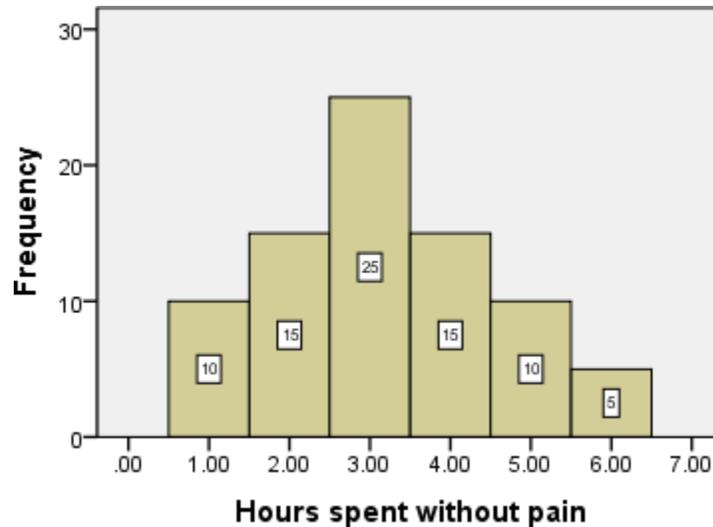
Answer the following questions:

1. The type of the graph is …**Histogram**…..
2. The variable is **hours spend without pain after certain surgery**.
   The type of the variable is …**Quantitive – continuous** …
3. The sample size is ……**80**………….
4. The number of patients spend a round 2 hours without pain is ……**15**……….
5. The percent of patients spend 3.5 hours or more without pain is ………**37.5%**……….
6. The number of patients stayed the longest time without pain is …………**5**………..
7. The lowest number of hours spent without pain is ………**1**……….
8. Width is ………**1**……….

H.W : For a sample of Saudi women , we obtain the following graph for the serum cholesterol (in mmol/l) .
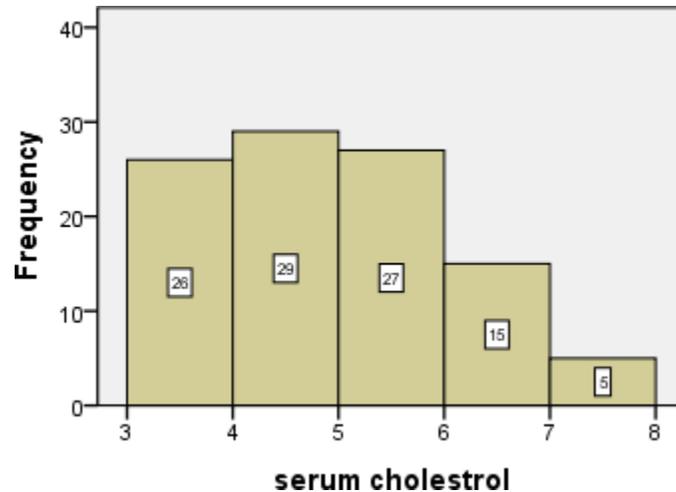
Answer the following questions:

1. The type of the graph is ……**Histogram**..
2. The variable is … **serum cholesterol** ……. The type of the variable is …**Quantitative - continuous**…
3. The sample size is ……**102**……….
4. The number of Saudi women with more than 6 serum cholesterol is ………**20**…….
5. The percent of Saudi women between 4 and 6 serum cholesterol is ………**54.90%**……….
6. The serum cholesterol with the lowest percentage is between the interval ………**7-8**……..
7. Width is ………**1**…………..