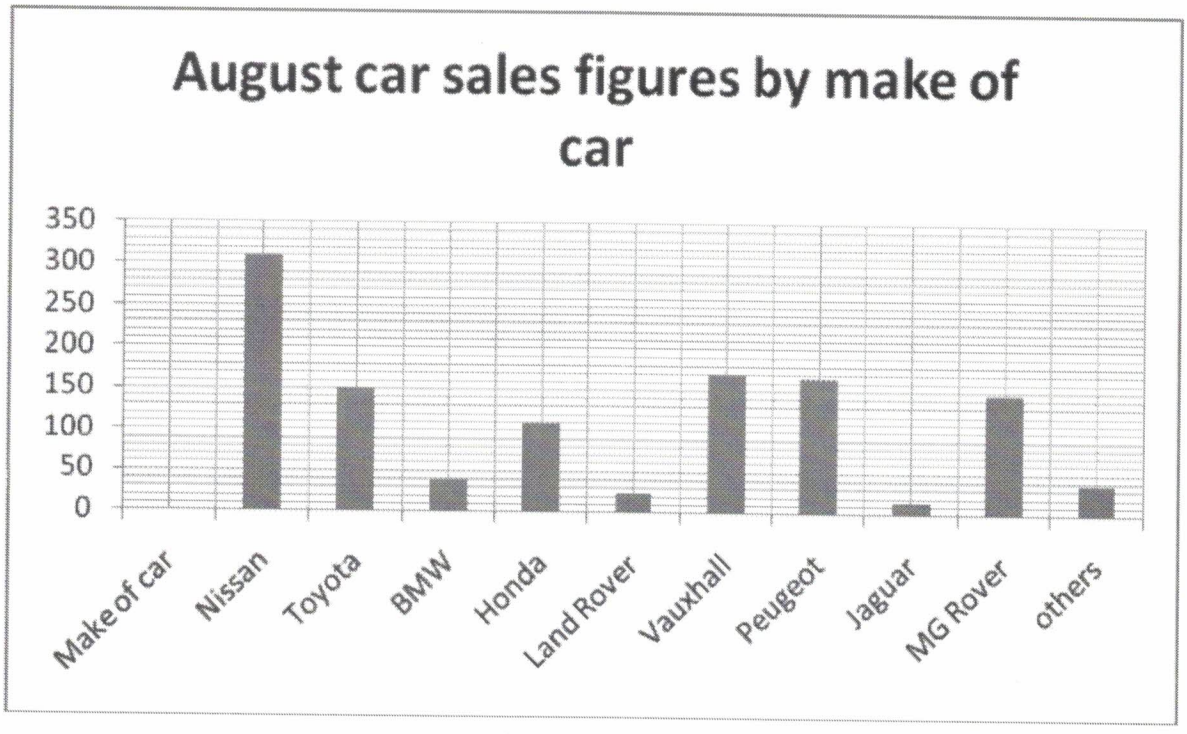
DUE DATE: MONDAY, September 14, 2020 by 11:59 PM on Gradescope

1. Look at the following graph of car sales and answer the following questions:



(a) What is the name of the above graph? Bar Graph

(b) Which make of car was the most popular? Nissan

(c) Which 2 makes of car sold over 150 each? Nissan, Vauxhall

(d) Which was the lowest selling make? Jaguar

2. Choose the correct answer:

(a) If in the pie chart representing the number of students opting for different streams of study out of a total strength of 1650 students, the central angle of the sector representing Arts students is 48°, what is the number of students who opted for Arts stream?

$48 = \frac{x}{1650} \times 360^\circ$

$= \frac{48 \times 1650}{360}$

$= 220$

(a) 220 (b) 240 (c) 275 (d) 320

(b) Mr. Bond's monthly income is \$2400 and his monthly expenditure on rent is \$250. The central angle of the sector representing rent expenses in the pie chart would be .....

(a) 30° (b) 37.5° (c) 45° (d) 60°

$x = \frac{250}{2400} \times 360^\circ$

$= 37.5$

3. The following scores represent the midterm examination grades for an elementary statistics course:

$$\begin{bmatrix} 3 & 16 & 17 & 18 & 19 & 20 & 20 & 21 & 23 \\ 23 & 24 & 24 & 24 & 25 & 26 & 26 & 27 & 27 \\ 27 & 28 & 28 & 28 & 29 & 29 & 29 & & \end{bmatrix}$$

(a) Construct a **frequency** table. Start your intervals at **0**, and use bins of size **5**.

(b) Draw the histogram corresponding to your results in your frequency table.

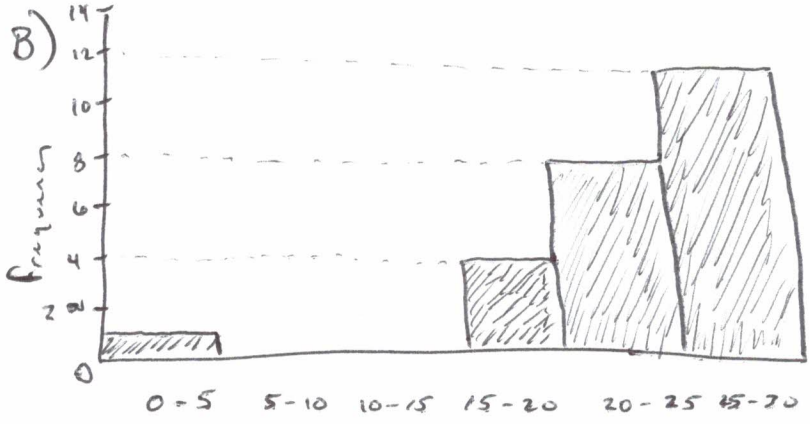
(c) Is the histogram skewed? If so, is it skewed to the left or right?

(d) Is there any outlier? Explain

A)

Class interval	Frequency
[0, 5	1
5, 10	0
10, 15	0
15, 20	4
20, 25	8
25, 30	12

B)



C) The histogram is not symmetrical, it is SKEWED. The tail of the histogram lies on the left side. The data is negatively skewed / left skewed

D) $Q_1 = 20 \quad Q_3 = 27$

$IQR = Q_3 - Q_1 = 27 - 20 = 7$

$Q_3 + 1.5(IQR) = 27 + 10.5 = 37.5$

$Q_1 - 1.5(IQR) = 20 - 10.5 = 9.5$

There is no number in the data that is greater than 37.5, but 3 is less that $9.5 = 3$ is an outlier