Histogram gcse questions pdf

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The frequency density of each group can be found using a formula: \text{frequency density} = \dfrac{{{{{{{{{{{{{{{{{{{{text{class}} is a grouped frequency table of the length of the string below. [4 mark] To construct the histogram, {8} the frequency density of each class is required. Below is a histogram showing the time taken to complete the quiz. Use the information to find out how many 1 small squares of the area are worth. Between 0 and 1.5 minutes, both the first and second bars are included. From 0 to 1 minute 10\times 12 =120 small squares and from 1 to 1.5 5\times 20 = 100 small squares (shown in the graph below for clarity). So there are 100+120=220 small squares between 0 minutes and 1.5 minutes in total, and the question is that it's 44 people. Therefore, one person is equal to 220 \div 44=5\text{small rectangle}. Now if you read from the graph, there should be 11 \div 5 = 22\text {people} which took 3-4 minutes to take the quiz, given that there are 11 \times 10 = 110 small squares between 3 and 4 minutes, given that there are five small rectangles. To draw a histogram, you need to know the frequency density of each row of data. The frequency density is calculated by dividing each frequency by the width of the connected class. In other words, you need to create a new column. A data table for frequency density. The first row of tables has a plant height of 0 - 10 cm and a frequency of 6. As mentioned above, the frequency density is the frequency density of the first row because it is the frequency width divided by the band width, the frequency density of the first row can be calculated as follows: \text {frequency density} = 6 \div10 = 0.6 By repeating this process for the remaining four rows, our complete frequency density column will look like the following: Now we are in a position to draw a histogram. The height is in the frequency density of the x and y-axes. Because the band width does not match (the band width of the 20-24cm category is only 4cm, but the band width of the 30-50cm category is 20cm), it means that the width of the bar to draw is not the same. The completed histogram should be as follows: the number of values for each class is represented by the area of each bar, not height. We've heard that 54 people can breathe for at least one minute, which means that the area of the bar for more than 60 seconds represents 54 people. Those who can breathe more than one minute are displayed as the right part of the last bar (70-100 seconds) and the second bar (60-70 seconds). To solve the area of these two bars, all you have to do is calculate a small rectangle. If 135 small squares represent 54 people, we can figure out how many people represent a single small rectangle: 54\text { people} = 135\text {small square} then: \text {1 person} = \dfrac{135}{54} = 2.5\text { small square} Now we know that one person is represented by 2.5 small squares, and we have to work between how many 40 seconds. The number of small squares between 20 and 40 is as follows: (5 \times 32) + (5 \times 20) = 160 + 100 = 260 is described in green in this graph. Therefore, the number of people who can breathe for 20 to 40 seconds is \dfrac{260}{2.5} = 104\text{people} a) because the data is imported from the histogram, you can see the frequency density and band width, but you need to calculate the rider (frequency) below 30 km. When dealing with histograms, the key formula sat down with \text{frequency density} = \dfrac{{{{{{{{{{{{{{{{{{{{{{text{bandwidth}} then you need to rearrange this formula: \text{frequency density} = \dfrac{\\Text{{{≤}} Next \Text{Frequency} = \Text{Frequency}=\Text{[Time\Time][Bandwidth] Can be calculated as follows: The number of riders traveling between 0 and 20 km. : 4\times20 = 80\text{Rider} The number of riders driving 20-30 km (frequency) can be calculated as follows: : 10\times10 = 100\text{Rider} Thus the number of riders driving between zero 30 km: 80+100=180\text{rider} b) To solve the average length of the journey, you need to know the total number of riders. To do this, you need to know the number of riders, such as 0-20, 20-30, and 30-54 km. We already know that there are 100 riders with 80 riders running between 0 and 20 km and between 20 and 30 km. In the 30-57 km category, the band width is 27 km and the frequency density is 2, the number of riders can be calculated as follows: 27\times2 = 54\text{Rider} In the 57-70km category, the band width can be calculated as 13 km and the frequency density is 9. : 13\times9 = 117\text{Rider} The band width of the 70-90km category is 20 kilometers, the frequency density is 6, so the number of riders can be calculated as follows: 20\times6 = 120\text{rider} Now we don't know exactly how many riders are riding in each street category. On the 0-20 km route, 80 riders were able to travel 1 km or 19 km. What we need to do is assume that each bike ride distance is the halfway point of each distance category (this is an estimated average, not an exact average). The easiest thing we can do is to table data multiplied by the frequency of one column for the midpoint of each distance category, another column for the frequency (number of riders) and another column for the midpoint (this last column is to work with the total distance that all riders in that category are moving to solve the average; the total distance that all riders travel to be divided into the number of riders. : The total number of frequency columns is the total number of riders. The total distance of the 'midpoint multiplied by the frequency column' is the total distance that all riders travel. So the estimated average can be calculated as follows: \text {estimated average} = 22678.5\text {kilometer} \div \text471\text {rider} \about 48\text {kilometers} to complete the rest of the histogram, we need to address the frequency density for the length category that was not drawn before him. The frequency density for the 0 to 4 cm length category can be calculated as follows: \text{frequency density} = 32 \div 4 = 8 10-20 cm frequency density for the length category can be calculated as follows: \text{frequency density} = 22 \div 1 0 = 2.2 2 2 - 40 cm frequency density for the length category can be calculated as follows: \text {frequency density} = 42 \div 20 = 2.1 40 - 45 cm length category can be calculated as follows: Next: \Text{Frequency Density} = 30 \div 5 = 6 frequency density The 55 to 70 cm length category can be calculated as follows: \text{frequency density} = 9 \div 15 = 0.6 Since the frequency density for each length category has been resolved, you can now plot in a histogram using results similar to below: b) For this part of the question, you need to fill the gap in the frequency column in the table. To do this, you need to take a frequency density reading from the histogram for the two-length category in question. Looking at the histogram, the frequency density of the 4-10cm category is 3.5 and the frequency density of the 45-55cm category is 4.6. All you need to do is rearrange the frequency density formula so that you can resolve the frequency. Text {frequency density} = \dfrac{{{{{{{{{{{{{}}}}}}} Next \Text{Frequency}=\\[Frequency]\Time\Text{Bandwidth} 4 to 10cm Length Category Frequency is as follows: You can calculate: 3.5\times6=21 45 to 55 cm length categories can be calculated as follows: 4.6\times10=46a) The key information in this question is that 15 bags of flour are 35-40 pounds. What we need to do is to see and see the area of the histogram that this represents. The area of the 35 - 40-pound bar (don't accidentally work the entire area of 30 – 40 pound bars!) can be calculated as follows: 2.5\times30\text{small square} = 75\text{ small square} thus we can conclude that 15 bags of flour are represented by 75 small squares. 15\Text {Bag} = 75\Text {Small Rectangle} Then 1\Text {Small Rectangle} = 5\Text {Small Rectangle} All we have to do now is work 80 pounds upwards from how many small squares. Between 80 and 95 pounds are 75 small squares, and between 95 and 100 pounds, there are more than 125 small squares, giving us a total of 200 small squares. Five small squares represent a bag of flour, so 200 square meters represents 40 bags of flour. b) The answer to part a) is only an estimate because it processes grouped data. The number of envelopes weighing between 80 and 95 pounds was assumed to be between 70 and 95 pounds, {3}{5} {3}{5} the number of flour bags. In one extreme, all of these bags of flour are capable of less than 80 pounds, and other extreme, they can all weigh more than 80 pounds. c) We know from the question that there are a total of 185 bags of flour. Therefore, the median of the flour bag is 93^{{{{{{text{rd} the weight of the bag (93 is a 'mid point' of 185). So we need to figure out what weight bands are in the bag, which is missing 93^{{text{d}} and it will be difficult at this stage (impossible) because we don't know how many bags of flour are in the 30- and 40-pound categories, etc. in the 30-40-pound category, etc. (impossible), we know from the first question, that the weight between a bag of 15 flour is 35 and 40 pounds. Total 30- to 40 pound categories, The number of bags between 30 and 40 pounds is: 15\times2 = 30 \text { bag} in the 40 - 55 pound category, this area is 1.5 times of 30-40 pound strips, so so far we have not yet reached the flour bag because it accounted for the first 75 bags of flour (50 + 75 = 125). The 55- to 65-pound category has the same width as the 30- to 40-pound category. If you compare this area to the 30-pound to 40-pound category, the area is 25 small squares, which are larger than the 30-pound to 40-pound category. So once you know what 25 small rectangular areas represent, you can add them to 30 (the number of bags listed in the 30-40 pound category). In the first question, we know that 5 small squares correspond to one bag, so 25 small squares correspond to 5 bags. Therefore, the 55-pound - 65-pound category corresponds to 35 bags. There are 30 bags in the 30-40 pound category and an additional 45 bags in the 40- to 55 pound category, so there are 75 bags weighing between 30 and 55 pounds. Therefore, the 55-65 pound category accounts for 76 ^{\\text{th} bags (35 bags between 110 and 30-55 pounds, 55 pounds to 65 pounds) in bags of 76^{\\text{th}. Now you are in a position to calculate the expected weight of your bag at 93^{\{{text{d}} (this is a hard bit!!) if you subtract 75 bags from 93 pounds to less than 55 pounds, you can figure out that the 93^{{text{rd}} bag will be 18 of 35 bags between 55 lbs and 65lbs. You. We can write this as \frac{18}{35}. So where is this fall in the weight category? It's way between \frac{18}{35} will drop to 55 - 65 pounds. Since this is a category that weighs 10 pounds, we need to do the following calculations: \dfrac{18}{35}\times10 = 5.14 \text {pounds} because the category starts at 55 pounds, The weight of the next central bag (93^\\text {rd}} bag is 55+5.14=60.14 \text≤) 20 bags in the 55-65 lb category, and if the bag represents the median of this category 10^\text≤}bag can line exactly 20 bags in the category 20 in the category. If you weigh 60 pounds, the estimated weight will be between 55 pounds and 65 pounds, so the weight is 60 pounds. Pounds.)