

Name: _____

Show work needed to justify your answer.

Date: _____

HW: # 25: Math IBSL - Standard 24 - Measures of Central Tendency

5 points

2 Find the mode of each frequency table.

a

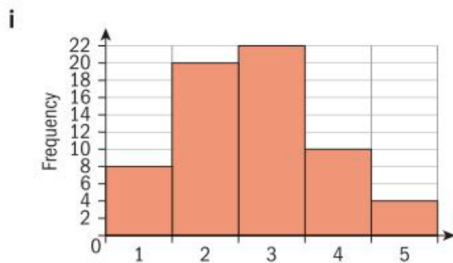
Shoe size	f
8	8
9	6
10	9
11	7
12	7

10

b

Marks (y)	f
$0 < y \leq 20$	2
$20 < y \leq 40$	13
$40 < y \leq 60$	25
$60 < y \leq 80$	55
$80 < y \leq 100$	34

3 a Find the mode from each histogram.



3

3 A group of teachers were asked how many cups of coffee they drank in a typical day. The results are shown in this table.

Cups	0	1	2	3	4	5
f	6	5	4	7	10	4

Find the mean number of cups of coffee.

$$\frac{0 + 5 + 8 + 21 + 40 + 20}{36} = \frac{94}{36} \approx 2.6$$

6 Mo works as a barista in a coffee shop and records the total amount, per day, that he receives in tips.

Tip (\$)	f
$0 < \$ \leq 10$	6
$10 < \$ \leq 20$	14
$20 < \$ \leq 30$	15
$30 < \$ \leq 40$	8
$40 < \$ \leq 50$	2

$$\frac{5(6) + 15(14) + 25(15) + 35(8) + 45(2)}{45}$$

What is his average amount of tips per day, to the nearest cent?

\$21.89

Name: _____

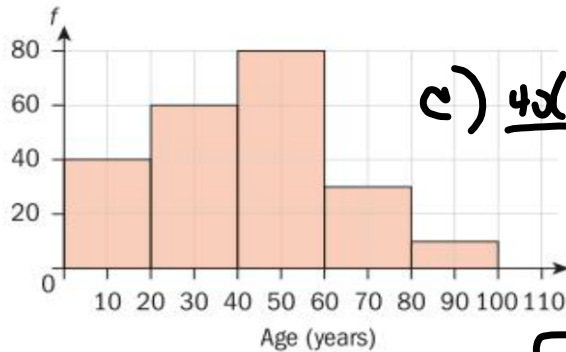
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8 The histogram represents the ages of the people in a village.



a) $40 + 60 + 80 + 30 + 10$

c) $\frac{40(10) + 30(60) + 50(80) + 70(30) + 90(10)}{220}$

a How many people are there in the village?

220

b Write down the modal class of the distribution.

$40 < t \leq 60$

c Find the mean age.

41.8

9 If the mode of this set of numbers is 2 and the mean is 5, find the values of a and b .

1, 2, a , 4, 5, 6, b , 8, 10

$a = 2$

$\frac{1 + 2 + 2 + 4 + 5 + 6 + b + 8 + 10}{9} = \frac{5}{1}$

$\frac{b + 38}{9} = \frac{5}{1} \rightarrow b + 38 = 45$
 $b = 7$

10 The mean of 8, x , 17, $2x + 3$ and 45 is 23. Find the value of x .

$\frac{8 + x + 17 + 2x + 3 + 45}{5} = \frac{23}{1}$

$3x + 73 = 115$

$3x = 42$

$x = 14$