

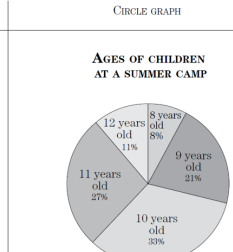
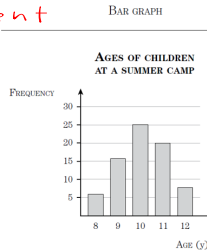
PART A: DIFFERENTIATING BETWEEN A BAR GRAPH/CIRCLE GRAPH AND A HISTOGRAM

Recall:

Example: Note the following charts and which types of graphs we choose to represent them.

AGES OF CHILDREN AT A SUMMER CAMP percent

AGE (y)	^f FREQUENCY	RELATIVE FREQUENCY (%)
8	6	8
9	16	21
10	25	33
11	20	27
12	8	11
TOTAL	75	100



use bar graph

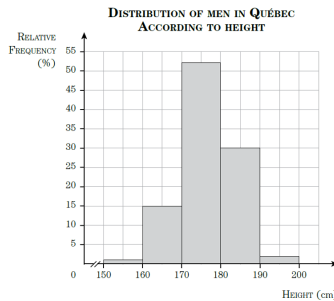
use circle graph

discrete quantitative

100%

DISTRIBUTION OF MEN IN QUÉBEC ACCORDING TO HEIGHT

HEIGHT (cm)	MEN
[150, 160[	1%
[160, 170[	15%
[170, 180[	52%
[180, 190[	30%
[190, 200[	2%



continuous quantitative amount

qualitative

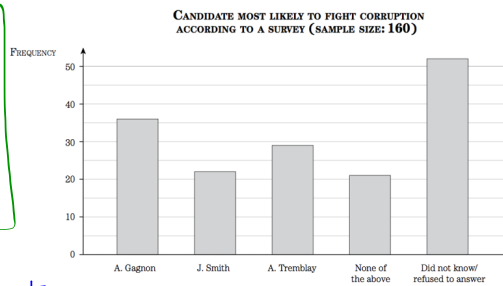
quality

worth

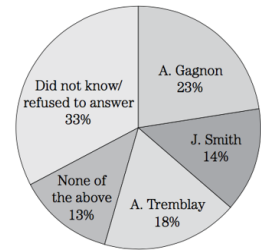
Example: Note the following charts and which types of graphs we choose to represent them.

CANDIDATE MOST LIKELY TO FIGHT CORRUPTION

POSSIBLE ANSWER	FREQUENCY	RELATIVE FREQUENCY (%)
Ariane Gagnon	36	23
John Smith	22	14
Arthur Tremblay	29	18
None of the above	21	13
Did not know or had no opinion	40	25
Refused to answer	12	8
TOTAL	160	≈100



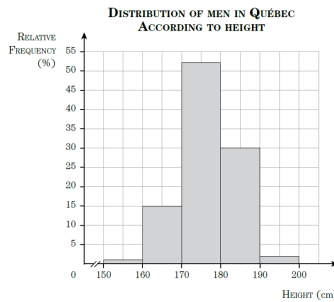
CANDIDATE MOST LIKELY TO FIGHT CORRUP ACCORDING TO A SURVEY (SAMPLE SIZE: 160)



Your task: Represent the frequency with the most appropriate statistical tool

DISTRIBUTION OF MEN IN QUÉBEC ACCORDING TO HEIGHT

HEIGHT (cm)	MEN
[150, 160[	1%
[160, 170[	15%
[170, 180[	52%
[180, 190[	30%
[190, 200[	2%



*→ circle graph ii. ?
→ bar graph ii.
→ broken-line graph.*

PART B: QUANTIFYING A DISTRIBUTION, ORGANIZING A DISTRIBUTION WITH A FREQUENCY CHART, REPRESENTING A DISTRIBUTION WITH A GRAPH

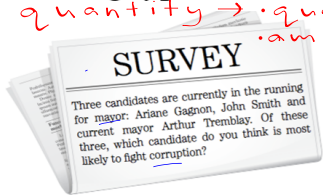
Example: Note the following typical exam complex task:

P9 3 / city town

counting
quantity → quality
amount

Two months before the municipal election, the local newspaper where you work decides to do its own survey of a random sample of 160 people. Here is the question that was asked:

Distribution: a group of data values



Here are the answers that were obtained:

S	S	T	N	A	G	N	N	N	T	G	R	N	T	G	G	T	A	S	G
T	G	R	T	N	N	A	G	G	T	A	G	A	G	T	S	N	T	T	S
G	A	S	S	G	N	N	S	N	G	S	A	A	A	G	G	G	N	T	R
N	N	A	A	S	R	A	N	G	R	N	S	N	S	R	S	T	G	N	R
S	T	T	G	T	T	T	N	S	N	N	G	G	S	N	S	A	S	G	
T	R	G	N	S	T	N	A	A	G	T	T	R	G	G	N	G	A	G	A
N	N	N	N	G	N	T	N	N	R	G	T	S	G	A	G	T	G	R	N
A	G	N	A	T	N	R	S	G	T	G	T	N	S	N	N	A	N	N	T

Meaning of letters:

G = Gagnon S = Smith T = Tremblay
A = none of the above N = did not know or had no opinion R = refused to answer

You must

- Construct a graph to represent the above distribution
- Make relevant conclusions that can be drawn from the survey

- sentence
- observation

Ex: The majority of people said they did not know who could fight corruption best.

Ex. Smith is the least popular candidate because he got the least amount of votes (he has the lowest frequency)

Compilation chart

G	#####	= 36
S	#####	= 14
T	#####	= 18
A	#####	= 13
N	#####	= 25
R	#####	= 8

ii. Frequency chart

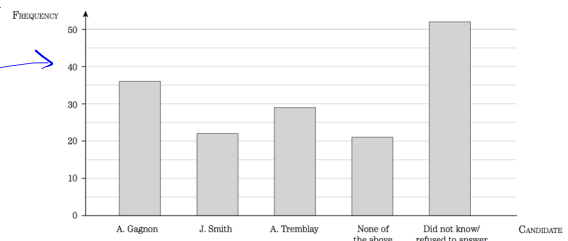
$\% = \frac{\text{part}}{\text{total}} \times 100\%$

CANDIDATE MOST LIKELY TO FIGHT CORRUPTION

POSSIBLE ANSWER	FREQUENCY	RELATIVE FREQUENCY (%)
Ariane Gagnon	36	23
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None of the above	21	13
Did not know or had no opinion	40	25
Refused to answer	12	8
TOTAL	160	=100

iii. Graph

CANDIDATE MOST LIKELY TO FIGHT CORRUPTION ACCORDING TO A SURVEY (SAMPLE SIZE: 160)



Pg 5. Constructing a Bar Graph

→ need graphing paper.

Example:

POSSIBLE ANSWER x	FREQUENCY y
Ariane Gagnon	36
John Smith	22
Arthur Tremblay	29
None of the above	21
Did not know or had no opinion	40
Refused to answer	12
TOTAL	160

step i.
Label x
axis and
 y axis
(horizontal
and vertical
lines)

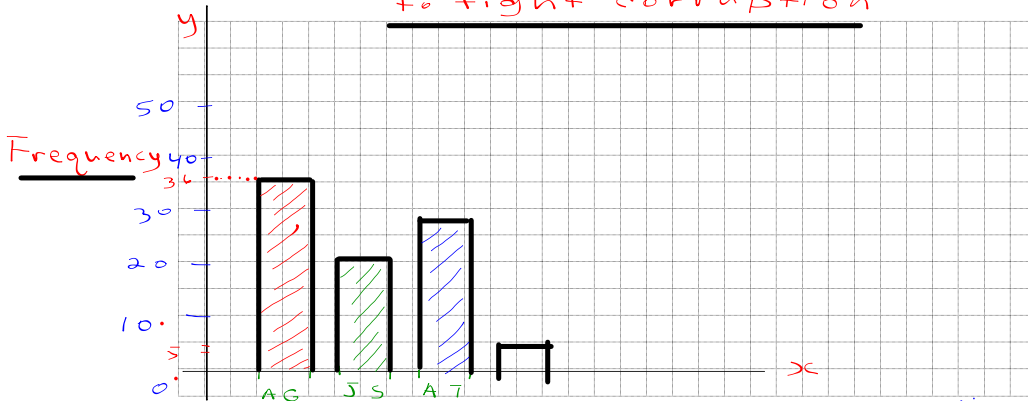
step ii. graduate
to y -axis. To know
what to up by
divide range by 5.

$$\begin{aligned} \text{Range} &= \text{max} - \text{min} \\ \text{max} &= 40 \\ \text{min} &= 12 \end{aligned}$$

$$\begin{aligned} \text{range} &= 40 - 12 \\ \text{range} &= 28 \\ \text{go up} &= \frac{\text{range}}{5} \\ \text{by} & \\ \text{go up} &= 5.6 \\ \text{by} & \end{aligned}$$

$$\begin{aligned} \text{go up} &= 5 \\ \text{by} & \\ \text{easy number.} & \end{aligned}$$

Candidate most likely
to fight corruption



Possible Answers

* note: bars can't touch!

step iii.
→ give axis
a title, give
whole a title,
and put a
legend if
necessary

Pg 6

Legend

- A.G. = Arianna Gagnon
- J.S. = Smith, John

Question 1: Students are polled about which method of transportation they take to arrive to school each day.

The 6 different options were established:

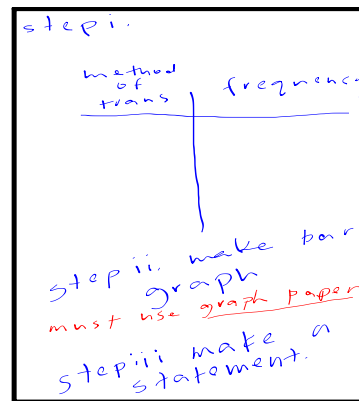
- i. Bus (B)
- ii. Car (C)
- iii. Walking (W)
- iv. Other (O)

55 students were surveyed and you obtained the following results:

B	B	C	C	W	C	B	W	B	B	C
C	C	C	B	C	B	O	W	O	B	C
B	W	W	B	B	B	O	B	C	B	B
C	C	O	B	B	W	W	B	B	C	B
C	O	B	B	W	B	W	B	B	O	B

You must:

- construct a graph to show the distribution of the different transportation categories for the 55 students
- make a conclusion that can be drawn from survey



- afterwards:
→ practice circle graph
- homework from book:
p171 q. 6.14 - 6.15
p172 q. 6.16 - 6.17
p174 q. 6.19 - 6.21