Worksheet 2015-8ÆJ-00002(1)

(1) Consider the following set of data and answer the following questions:

67 23 33 56 37 29 66 59 40 112 64 76 21 37 69 33

21	23	29	33	33	37	37	40	56	59	64	66	67	69	76	112

(a) Determine the range.
(b) Determine the outlier(s), if applicable.
(c) Write down the mode.
(d) Determine the median by first arranging the data.
(e) Calculate the average mean of the data.

(a) $112 - 21 = 91$

(b) 112

(c) 33 and 37

(d) $M = \frac{40+56}{2} = \frac{96}{2} = 48$

(e) Mean $= \frac{822}{16} = 51,375$

(2) Explain the difference between a bar graph and a histogram.

Histogram → No spaces between columns

Bar graph → Spaces between columns

(3) Calculate the class boundaries and the class midpoint for each of the classes in the table:

Class:	A	B	C	D	E	F
Class-interval:	0 - 24	25 - 49	50 - 74	75 - 99	100 - 124	125 - 149

Lower boundary: 0 25 50 75 100 125

Class midpoint: 12 37 62 87 112 137

Upper boundary: 24 49 74 99 124 149

(4) The heights (measured in cm) of the school's RSC is as follow:

~~145~~	~~187~~	~~154~~	~~167~~	~~188~~	~~178~~	~~156~~	~~189~~	~~180~~	~~175~~	~~168~~
~~166~~	~~161~~	~~199~~	~~167~~	~~156~~	~~170~~	~~171~~	156	~~187~~	~~179~~	~~185~~
~~181~~	~~150~~	~~176~~	~~168~~	~~182~~	~~178~~	~~185~~				

(a) Present the data as a stem-and-leaf diagram.

Stem:	Leaf:	Frequency:
14	5	1
15	0 4 6 6 6	5
16	1 6 7 7 8 8	6
17	0 1 (5) 6 8 8 9	7
18	0 1 2 5 5 7 7 8 9	9
19	9	1

Key : 14/5 = 145 Total : 29

(b) Determine the modal length of the RSC.

Modal length (15th) = 156 cm

(c) Calculate the average height of the members of the RSC.

Ave. $= \frac{5004}{29}$

$= 172,5517\ldots$

$\approx 172,6$ cm

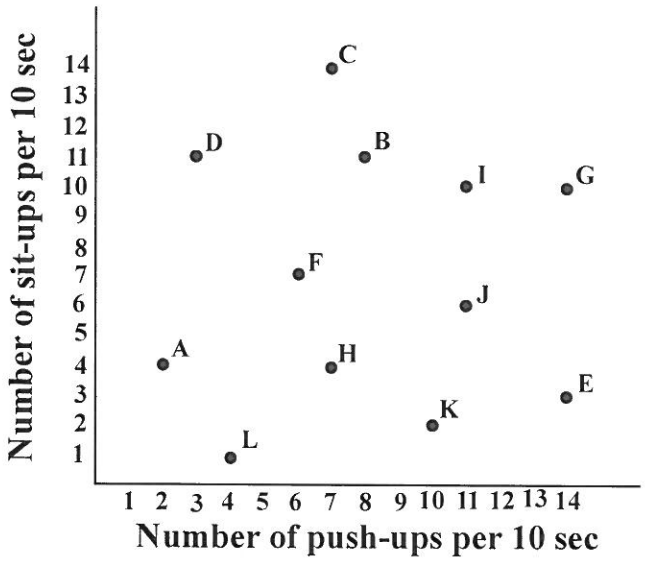
(d) Determine the median of the data.

Median = 175 cm

(5) Consider the scatter graph and answer the following questions:
The graph shows the correlation between the number of push-ups and the number of sit-ups that a group of grade 8 learners can do in 10 seconds.

(a) Are there any outliers?
If so, name the point(s).

No



(b) Fully describe the scattering.

No correlation

(c) What is the highest number of push-ups done in the 10 seconds?
From which point(s) on the graph was the reading done?

14 push-ups at G and E

(d) What is the highest number of sit-ups done in the 10 seconds?
From which point(s) on the graph was the reading done?

14 "sit-ups" at C