Name: Date:

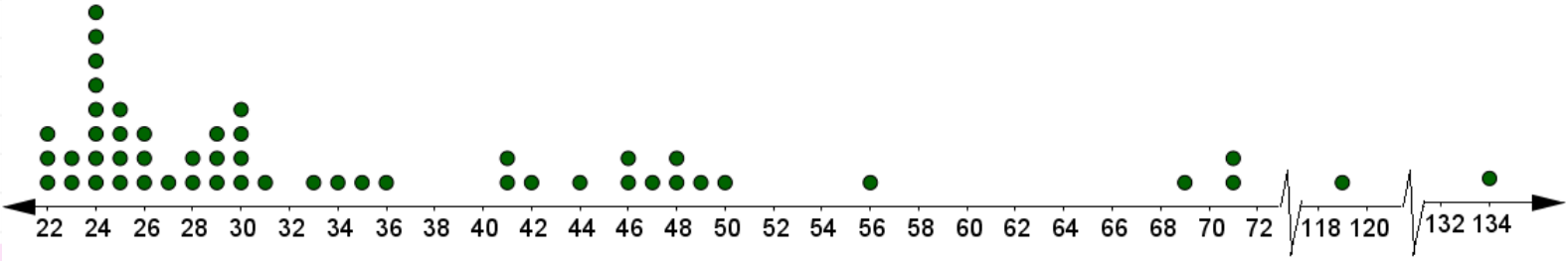
WORKSHEET

Constructing graphs

Three students, John, Vassiliki , James and Chris, organized their data using graphs. John used the Dotplot , Vassiliki and James the Stem and Leaf plot and Chris the Histogram.

Dotplots

Task 1: In the picture below we can see the dot plot that John made.



number of goals

What are the advantages of the dot plot in comparison to the table 1 of the two previous pages?

What kind of information can you see at once at the dot plot?

Which information can't you see at the dot plot but you can find it at the tables?

Complete the next sentence and write your own, drawing as many conclusions as you can from the dot plot above.

Only ..... players in the history of the Champions league scored more than 100 goals.

The value that occurs most often in a data set is named the mode. What is the mode of the number of goals that the top 52 scorers achieved in the history of the Champions League?

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Stem and leaf plots

Task 2: James thought that it might be a good idea if he divided the scorers into groups, according to the tens of goals they scored. He made a table like this where we can see the distribution of the scorers in each group.
Complete James' table and compare it with John's dotplot .
Which information is easier to see at James' table and which is missing in his table?

Goals	Number of goals
20	~~IIII~~ I
30	II
40	II

Task 3: Vasiliki said that at James' table she could not see the number of goals that each scorer achieved in his career , so she thought of drawing a table like the one below in order to present the data .
Vassiliki named her table of data as STEM and LEAF PLOT . She explained that the row 2 | 4 5 2 2 2 stands for the 5 players that scored 24 , 15, 22 , 22 and 22 goals respectively.

2	2	2	2	4	5
3	5				
4	1	2	9		

Key: 3|1 means 31

Copy the stem and leaf plot proposed by Vassiliki and complete it with the data in Table 1 . Compare it with James' table.
Why do you think that Vassiliki named her plot as Stem and Leaf;
As you see 1st row of the stem and leaf plot that you made is too big in comparison with the other two rows. Also it is not easy to see how many players scored the same number of goals. So in order to improve the stem and leaf proposed by Vassiliki, draw two new stem and leaf tables as follows:

a. One plot in which you must split each stem in two . One, in which the digit of units is below five and one five and above .

b . One more plot where the number of goals are in order. Draw the leaf plots in the same manner as Vassiliki did.