

Name: **Key**

Statistics Quiz #2

Study Guide

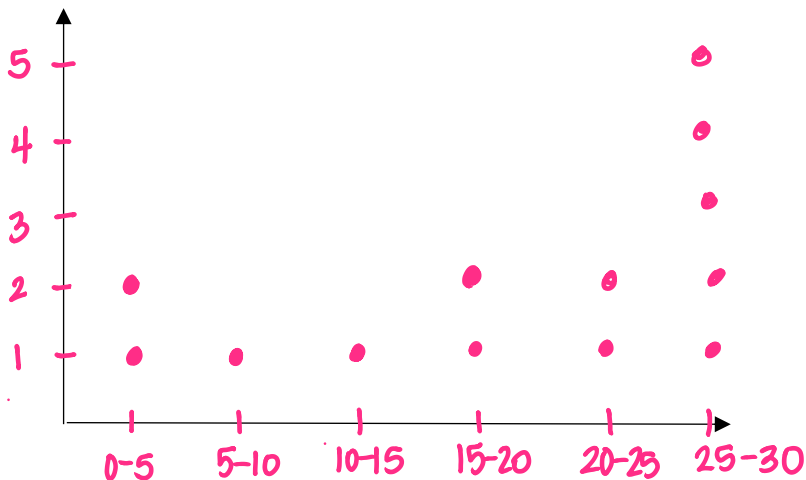


Objective: Create and interpret a dot plot.

The data below represents the number of minutes students spent studying for the quiz.

~~15~~ ~~0~~ ~~20~~ ~~18~~ ~~5~~ ~~0~~ ~~29~~ ~~25~~ ~~25~~ ~~10~~ ~~20~~ ~~25~~ ~~29~~

Interval	Frequency
0-5	2
5-10	1
10-15	1
15-20	2
20-25	2
25-30	5



a) What percentage of students spent at least 15 minutes or more studying for the quiz?

$\frac{9}{13}$ 69%

Objective: Find the mean, median, and mode of a data set.

The data below represents the number of minutes students spent studying for the quiz.

~~15~~ ~~0~~ ~~20~~ ~~18~~ ~~5~~ ~~0~~ 30 25 25 10 ~~20~~ 25 30

Find the mean: $\frac{223}{13} = 17.15$

Find the median: ~~0~~ ~~0~~ ~~5~~ ~~10~~ ~~15~~ ~~18~~ **20** ~~20~~ ~~25~~ ~~25~~ ~~30~~ ~~30~~

20

Find the mode: **25**

Objective: Create a box-and-whisker plot.

The data below represents the number of days of school a student missed over the course of a year.

~~4~~ ~~0~~ ~~10~~ ~~9~~ ~~7~~ ~~2~~ ~~15~~ ~~20~~ ~~18~~ ~~3~~ ~~12~~ ~~22~~

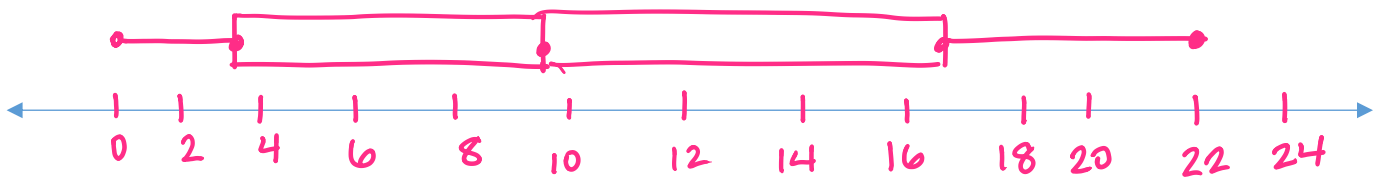
Order the data:

~~0~~ ~~2~~ ~~3~~ | ^{3.5} ~~4~~ ~~7~~ ~~9~~ | ^{9.5} ~~10~~ ~~12~~ ~~15~~ | ^{16.5} ~~18~~ ~~20~~ ~~22~~

Fill in the table:

Min	Q1	Median	Q3	Max
0	3.5	9.5	16.5	22

Create a box-and-whisker plot below:



Objective: Determine if an outlier exists and create a box-and-whisker plot.

The data below represents the number of hours of sleep students slept before the night of the quiz.

~~8~~ ~~7~~ ~~0~~ ~~6~~ ~~7~~ ~~8~~ ~~9~~ ~~7~~ ~~6~~ ~~5~~ ~~6~~ ~~7~~

Order the data:

0 5 6 | ⁶ 6 6 7 | ⁷ 7 7 7 | ^{7.5} 8 8 9

Determine if there is an outlier by following the steps:

- a) Determine the IQR: $7.5 - 6 = 1.5$
- b) Multiply the IQR by 1.5 $1.5 \times 1.5 = 2.25$
- c) Determine the range of outliers $3.75 - 9.75$
- d) Does an outlier exist? What is it? **yes (0)**

Create a box-and-whisker plot below:

