Math 6 - Unit 6: Statistics
Unit 6 Study Guide

Name: **KEY**

Class Period: 1 2 3 4 Date: _____

Use the following data to answer problems 1-4.
At the last five basketball games, Simone scored the following points: **12, 15, 9, 11, 8.**

1) What is the **mean** number of points Simone scored?
$$55 \div 5 = 11$$

8, 9, 11, 12, 15

2) What is the **median** number of points Simone scored?
11

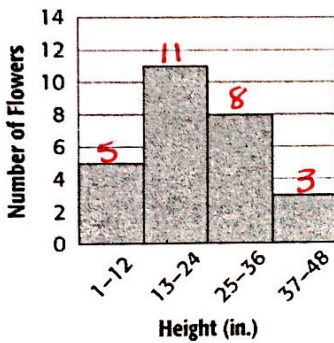3) What is the **mode** of Simone's scores?
NO MODE

4) What is the **range** of Simone's scores?
$$15 - 8 = 7$$

Use the histogram below to answer questions 5-8.

Heights of Flowers

5) How many flowers were less than 25 inches in height? 16

6) How many flowers are in the 25-36 in. interval? 8

7) How many flowers were at least 13 inches tall? 22

8) Which interval had the fewest number of flowers? 37-48

For questions 9-13 indicate whether the question IS statistical (S) or NOT statistical (NOT).

9) How many times has each of my classmates been to the beach? S

10) How many kids does Mrs. Katz teach? N

11) How many pairs of pants does each of my family members own? S

12) How many ice cream shops are in each town in Georgia? S

13) How many songs are on Katherine's iPod? N

Use the dot plot to answer problems 14 - 16:

14) What is the **mode** of the data? 5

15) What is the **range** of the number of runs scored?
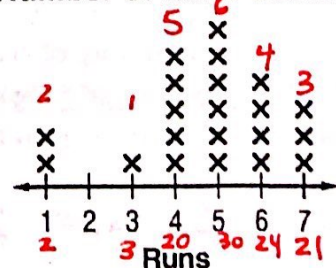$$7 - 1 = 6$$

16) What is the **mean** number of runs scored?
$100 \div 21$ 4.76 runs

17) Which measure of center is **MOST** affected by an outlier?
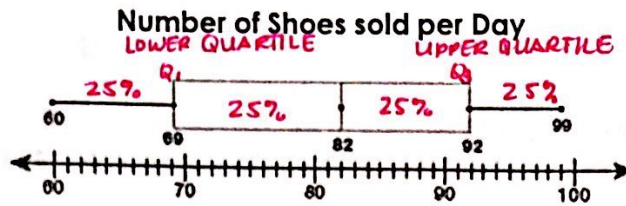MEAN

Number of Runs Scored

$100 \div 21$
1,1,3, 4,4,4,4,5, 5,5
5,5,5,5,5,6,6,6,7,7,7

Use the box plot to answer questions 18 – 21.

Number of Shoes sold per Day

LOWER QUARTILE   UPPER QUARTILE

25% Q_1 25%   25% Q_3 25%

60   69   82   92   99

18) What percent of data is **GREATER THAN** 69 (the lower quartile)? **75%**

19) What is the **median** of the data in the box plot?
82

20) What is the **IQR** of the data in the box plot?
$Q_3 - Q_1 = 92 - 69 = \boxed{23}$

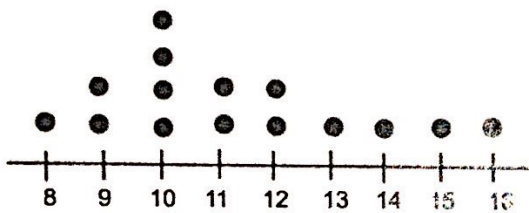21) Which **set of data** could be used to create the box plot?

    ~~a.~~ 60, 61, 61, ⟨69⟩ 79, 80, 99   b. ⟨60, 61, 61 ⟨82⟩ 83, 90, 99⟩

    ~~c.~~ 60, 61, 61, 82, 79, 80, 100   ~~d.~~ 0, 61, 61, 82, 79, 80, 99

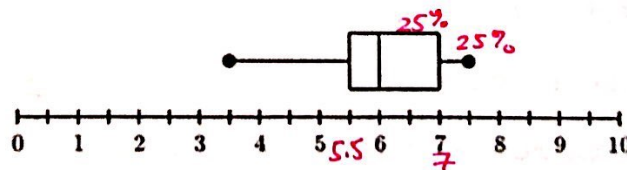22) How many **total people** were surveyed in the dot plot below?

15 people.

8   9   10   11   12   13   14   15   16

Number of Shoes Students Have

Use the box plot to answer questions 23-24.

Number of Baskets Made for Each Player on the Team

25%   25%

0   1   2   3   4   5 5.5 6   7   8   9   10
                          7

23) What is the **interquartile range** (IQR) in the box plot? $7 - 5.5 = \boxed{1.5}$

24) What percent of participants **scored more than 6 baskets**?
50%

25) The 5-Number Summary of a box plot is shown below.
What is the **interquartile range** (IQR) for this set of data?
Minimum: **7**   Lower Quartile (Q_1): **9**   Median: **18**   Upper Quartile (Q_3): **26**   Maximum: **58**

$Q_3 - Q_1 = 26 - 9 \quad \boxed{17}$

Use the histogram to the right to answer questions 26-27.

26) The histogram to the right shows the ages of the adults who went to see **Black Panther**.
   Which statement about the histogram is **TRUE**?

   a. Most ages fall within the 60-70 interval.
   b. Most ages fall within the 20-30 interval.
   c. No person fell within the 80-90 age interval.
   d. No person fell within the 50-60 age interval.
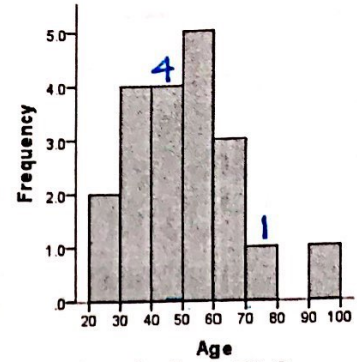
27) How many more people who went to see **Black Panther** are in their 40s than in their 70s?
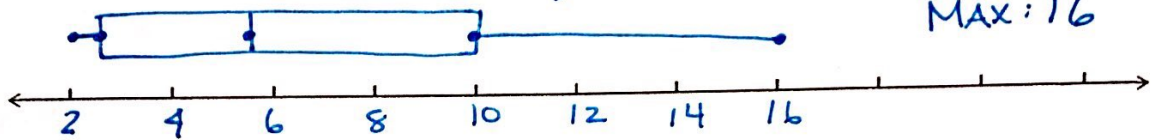
   3 PEOPLE

Constructed Response

28) The data below represents the number of students missing a pencil in all the classes on 6B.

   10, 5, 6, 5, 11, 10, 2, 2, 3, 8, 16, 2, 10, 3, 8, 2

   a) Make a **box plot** of the data.   2, 2, 2, 2, 3, 3, 5, 6, 6, 8, 8, 10,
                                          10, 10, 11, 16

   MIN: 2
   Q_1 : 2.5
   Med : 5.5
   Q_3 : 10
   MAX : 16

   b) Find one measure of spread. Clearly identify which measure of spread you are finding. _____
      RANGE   16-2 = 14   IQR   10-2.5 = 7.5
   c) Find one measure of center. Clearly identify which measure of center you are finding. _____
      MEDIAN - 5.5   MODE: 2
   d) Circle one of the choices below to describe the shape of the box plot.

      a. skewed left   b. skewed right   c. symmetrical

29) What are three measures of center? MEAN, MEDIAN, MODE

30) What are two measures of spread (variation)? RANGE, IQR

31) How are IQR and Range similar? FOUND   BY   SUBTRACTING

_____

32) How are IQR and Range different? RANGE   COVERS   ALL   DATA
    IQR   COVERS   MIDDLE   50%   OF   DATA