Warm Up Grade 7

The table shows the heights and circumferences of 5 trees.

a) What is the mean height?
b) What is the mean circumference?
c) What is the mode of the heights?
d) What is the mode of the circumferences?

a) $Mean_H = \dfrac{80}{5} = 16\,m$

b) $Mean_C = \dfrac{310}{5} = 62\,cm$

Tree	Height (m)	Circumference (cm)
Oak	20	65
Elm	16	82
Maple	20	60
Birch	15	82
Poplar	9	21

c) $Mode_H = 20\,m$

d) $Mode_C = 82\,cm$

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1. a) 3, 4, 4, 5

$$mean = \frac{16}{4}$$
$$= 4$$

b) 1, 7, 3, 3, 1

$$mean = \frac{15}{5}$$
$$= 3$$

c) 2, 2, 6, 1, 3, 4

$$mean = \frac{18}{6}$$
$$= 3$$

2 a) 2, 4, 7, 4, 8, 9, 12, 4, 7, 3
3

$$mean = \frac{60}{10} \qquad mode \ 4$$
$$= 6$$

b) 24, 34, 44, 31, 39, 32

$$mean = \frac{204}{6} \qquad mode - no \ mode$$
$$= 34$$

4.

9, 11, 13, 15, 20, 10, 12, 15, 10, 15

a)
mean $= \dfrac{130}{10}$ b) mode 15

$= 13$

c) If 19 and 25 were added:

mean $\dfrac{174}{12}$

$= 14.5$

mode doesn't change

5. 10, 26, 18, 34, 64, 18, 21, 32, 21, 54,
    36, 16, 30, 18, 25, 69, 39, 24, 13, 22

mean $\dfrac{590}{20}$ mode 18

29.5

b) Any list of ages would be fine
as long as 36 occured the most.

6. a) Games Played

   45   60   64   51

mean $\dfrac{220}{4}$ mode - no mode

      55

b) Goals

  6   20   32   35

mean $\dfrac{93}{4}$ mode - no mode

    23.25

c) Assist

  10 28 39   39

mean $\dfrac{116}{4}$ mode 39

    29

d) Points

  16 48 71 74

mean $\dfrac{209}{4}$ mode - no mode

    52.25

7.
a) equally popular
volley ball and soccer

b) You can use the bar graph to
find because the longest bar
is the one that occured most often

c) 750, 700, 1125, 750, 660, 1500,
1800, 600, 800, 1350

mean $\dfrac{10\ 025}{10}$

$= 1002.5$

8. __6__ __3__ __7__ __9__ ____ ____

a) mean = 6
So the sum of the numbers
must $6 \times 6 = 36$
$6 + 3 + 7 + 9 = 25$
The other 2 numbers had to add
to give 11.

b) mode 3, mean 6

__6__ __3__ __7__ __9__ __3__ ____

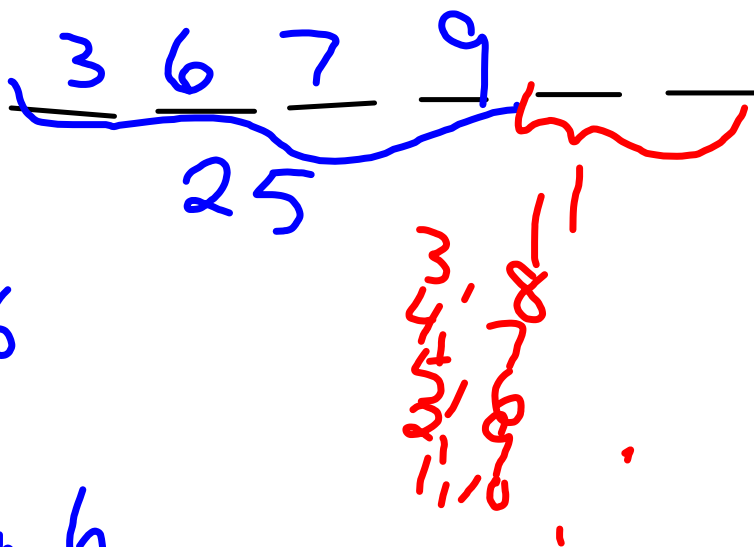sun has to be 36, it is 28,
so the last number is 8.

8. set of 6 numbers
   3, 6, 7, 9

a) mean = 6

$mean = \dfrac{sum}{6}$

$6 = \dfrac{sum}{6}$

$6 = \dfrac{\boxed{36}}{6}$ sum = 36

3 6 7 9 ___ ___

25

3, 8
4, 7
5, 6
3, 8
1, 6

b) 6 numb.
mode 3   mean 6
Sum 36

3   3   6   7   9   8

Median and Range

Median

The median is another average. It is **the middle number** of a set of ordered data. To find the median, **list the numbers in order then find the middle number**.

If you have 15 pieces of data, the 8th number will be the middle number (there are 7 numbers before and 7 numbers after it)

If you have 63 pieces of data, the 32nd number will be the middle

What happens if you have an even number of data?

If you have an even number of data, find the 2 middle numbers, add them, then divide by 2

$$\frac{\text{add two middle \#s}}{2}$$

Range

What is the range of a set of data? **Biggest — Smallest**

The range is the difference between the highest and lowest numbers.

Examples:
Find the median and range for the following:

(a) 15, 10, 19, 11, 16

10, 11, 15, 16, 19

Median = 15

Range = Big - Small
$= 19 - 10$
$= 9$

(b) 28, 31, 36, 24, 29, 33, 79, 32

24, 28, 29, 31, 32, 33, 36, 79
                middle

Median $= \frac{31+32}{2} = \frac{63}{2} = 31.5$

Range = Big - Small
$= 79 - 24$
$= 55$

Class/Homework

Answers on Pg 368

Page 264-265
#1, #2, #3, #6, #7a

Unit 7 Data Analysis (Part 1) Test will be _____

Topics: Mean, Median, Mode, Range, Outliers

8 Multiple Choice

3 Short Response

(VERY similar To wamp ups)

118, 118, 120 | 122 124, 138

121

6b) On 6th race

median = 121

On 6th race he need a time of
122