Honors Algebra 2 Trig - NASH
10.5 Day 2 Worksheet

Name Key

Find the mean, median, and mode of each set of values.

1. Customers per day: 98, 87, 79, 82, 101, 99, 97, 97, 102, 91, 93

79 82 87 91 93 97 97 98 99 101 102

Mean = $\frac{1026}{11}$

Mean: 93.3
Median: 97
Mode: 97

2.

Length (m)	12	13	14	15	16	17	18
Frequency	2	5	3	7	4	9	1

$2(12) + 5(13) + 3(14) + 7(15) + 4(16) + 9(17) + 1(18)$

Mean = $\frac{471}{31}$

Mean: 15.2
Median: 15
Mode: 17

3. Find the values at the 30th and 90th percentiles for each data set.

5581 5700 5700 5896 5972 5993 6075 6274 6283 6381

a) 6283 5700 6381 6274 5700 5896 5972 6075 5993 5581

30^{th} = 5700 90^{th} = 6283

b) ~~7 12 3 14 17 20 5 3 17 4 13 2 15 9 15 18 16 9 1 6~~ 30^{th} = 5 90^{th} = 17

1 2 3 3 4 5 6 7 9 9 12 13 14 15 15 16 17 17 18 20

4. The table shows average monthly temperatures of two cities. Find the mean, median and mode for each city.

	J	F	M	A	M	J	J	A	S	O	N	D	
Jacksonville, Florida	52.4	55.2	61.1	67.0	73.4	79.1	81.6	81.2	78.1	69.8	61.9	55.1	815.9
Austin, Texas	48.8	52.8	61.5	69.9	75.6	81.3	84.5	84.8	80.2	71.1	60.9	51.6	823

	Mean	Median	Mode
Jacksonville	68°	$\frac{67+69.8}{2} = 68.4°$	none
Austin	68.6°	$\frac{69.9+71.1}{2} = 70.5°$	none

5. The table displays the frequency of scores for one Calculus class on the Advanced Placement Calculus exam. The mean of the scores is 3.5.

Score	1	2	3	4	5
Frequency	1	3	f	12	3

a. What is the value of f in the table? 7

b. What is the mode of all of the exam scores? 4

c. What is the median of all of all of the exam scores? 4

$\frac{1+6+3f+48+15}{19+f} = 3.5$

$\frac{70+3f}{19+f} = 3.5$ $3.5 = .5f$

$70+3f = 3.5f + 66.5$ $7 = f$

6. Which of the following sets of data has a median of 17.5?

a. {10.0, 17.5, 14.0, 16.0, 27.5}

b. {12.5, 26.0, 17.5, 11.5, 10.5}

c. {13.0, 17.5, 15.0, 15.5, 17.5}

d. {14.5, 19.5, 16.0, 17.5, 24.0}

7. The number of hours Nadia spent painting each day during a one-week period are shown.

{1.5, 4.25, 1.0, 3.75, 6.0, 0.75, 0.25}. What is the mean number of hours per day that Nadia spent painting for the week?

$\frac{17.5}{7} = 2.5$

8. The mean of four numbers is 70. When a fifth number is included, the mean of the five numbers is 80. What is the fifth number?

Sum of 4 #'s = x

5th # = y

$70 = \frac{x}{4}$

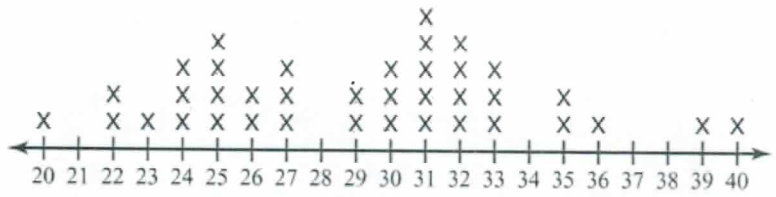
$280 = x$

$\frac{280+y}{5} = 80$

$280 + y = 400$

$y = 120$

9. A "wheat penny" is a Unites States penny that has a picture of wheat on one side. These pennies were only produced from 1909 through 1958. The members of a coin-collecting group counted the number of wheat pennies in each of their collections. The line plot below shows the number of wheat pennies in each member's coin collection.



Number of Wheat Pennies in Each Member's Coin Collection

a. What is the mode for this data? 31

b. What is the mean for this data? $\frac{1107}{38} = 29.1$

c. What is the median for this data? 30

10. The chart shows the frequency distribution of scores on an American History quiz.

a. What is the mode for this data? 5

b. What is the mean for this data? $\frac{91}{25} = 3.64$

c. What is the median for this data? 4

Quiz Scores

Score	Frequency
0	1
1	2
2	2
3	4
4	7
5	9

25