



Math Summer Assignment for
Statistics
Wall Township Math Department
Optional Summer Assignment



- ★ This summer assignment is intended to prepare you for the math course above.
- ★ You will find examples and video links to help you complete the practice.

Skill 1: Beginning Vocabulary

Vocabulary Term	Definition
statistics	
probability	
quantitative data	
categorical data	
frequency	
relative frequency	
measure of center	
measure of variability	
mean	
median	
mode	
range	
standard deviation	
outlier	

Skill 2: Frequency Tables with Relative Frequencies



Helpful Video Link: [How To Make a Relative Frequency Distribution Table](#)

Practice: Create a Frequency Table with Relative Frequencies

1) Twenty students were asked how many hours they worked per day. Their responses, in hours, are as follows: 5, 6, 3, 3, 2, 4, 7, 5, 2, 3, 5, 6, 5, 4, 4, 3, 5, 2, 5, 3.	2) Imagine you surveyed 50 people about their favorite ice cream flavor and got the following results: Vanilla: 15, Chocolate: 12, Strawberry: 8, Mint Chocolate Chip: 7, and Cookie Dough: 9.	3) You flip a coin 100 times and get 55 heads and 45 tails.
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Skill 3: Calculate Mean, Median, Mode & Range



Helpful Video Link:

[Measure Central Tendency : Mean-Median-Mode and Range](#)

Practice: Calculate Mean, Median, Mode & Range for the given sets of data.

1) 82, 23, 59, 94, 70, 26, 32, 83, 87, 94, 32

2) A basketball team plays 8 games. The number of points they score in each game is shown.

Game 1: 62
Game 2: 68
Game 3: 55
Game 4: 58
Game 5: 68
Game 6: 59
Game 7: 52
Game 8: 60

3) The students shared the number of minutes they exercised during the week. The results are shown in the table.

Time Exercised

Minutes	Frequency
20	6
30	9
60	8
90	2

Skill 4: Box and Whisker Plots



Helpful Video Link:

[Box and Whisker Plots Explained | Understanding Box and Whisker Plots \(B...](#)

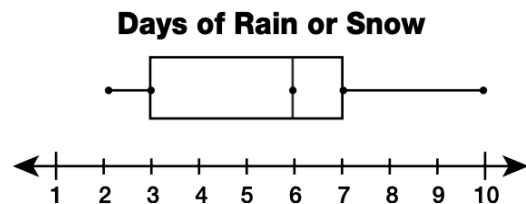
Practice: Create a Box and Whisker Plot from the given information.

1) 58, 71, 51, 67, 58, 55, 53, 57, 58, 62, 65	2) 85, 92, 73, 77, 80, 85, 91, 92, 99	3) Grades on the test. 85, 90, 75, 65, 100, 90, 75, 80, 80, 70
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Practice: Use the information to find the maximum, minimum, range, and median. Write each answer in a complete sentence that describes the data. Ex/ The maximum number of days it rained or snowed in a given month was...

4)

Maria recorded the number of days it rained or snowed each month during the past year. This box-and-whisker plot displays her data.



Skill 5: Bar Charts



Helpful Video Link: [Drawing Bar Charts by Hand](#)

Practice: Create a Bar Chart from the information provided.

1) The students shared the number of minutes they exercised during the week. The results are shown in the table.

Time Exercised

Minutes	# of Students
20	6
30	9
60	8
90	2

2) 28 children voted on their favorite Indoor Games. Uno was the most popular choice. The results of the voting can be seen below.

6 – Checkers
8 – Chess
9 – Uno
5 – Cards

Skill 6: Histogram



Helpful Video Link: [Statistics - How to make a histogram](#)

Practice: Create a Histogram from the information provided.

1) The coach collected the number of goals scored on average per game by each lacrosse player.

Time Exercised

Number of Goals Scored	Frequency
0-1	5
2-3	2
4-5	3
6-7	1
8-9	1

2) The teacher listed all of her students' grades as shown. Use the grading scale to create the histogram.
A = 90-100, B = 80-89, C = 70-79, D = 60-69, F=0-59

Student	Grade	Student	Grade
Student 1	82	Student 10	98
Student 2	78	Student 11	95
Student 3	79	Student 12	88
Student 4	88	Student 13	89
Student 5	92	Student 14	84
Student 6	95	Student 15	81
Student 7	76	Student 16	75
Student 8	71	Student 17	88
Student 9	68	Student 18	88