

REVIEW FOR EXAM # 1
BOOKLET # 4
CUNY York College | Math 111
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1. Find mean, variance and SD for 1, 2, 3
2. Calculate the mean (24.5)

A Class	B Frequency f	C Midpoint X_m	D $f \cdot X_m$
5.5–10.5	1		
10.5–15.5	2		
15.5–20.5	3		
20.5–25.5	5		
25.5–30.5	4		
30.5–35.5	3		
35.5–40.5	2		

3. A survey showed this distribution for the number of students enrolled in each field. Find the mode. Business 1425; Liberal arts 878; Computer science 632; Education 471; General studies 95

4. A small company consists of the owner, the manager, the salesperson, and two technicians, all of whose annual salaries are listed here. (Assume that this is the entire population.) Find the mean, median, and mode.

Owner	\$50,000
Manager	\$20000
Tech	\$9000
Salesperson	\$12000
Tech	\$9000

5. **Calculating GPA:** A student received an A in English Composition I (3 credits), a C in Introduction to Psychology (3 credits), a B in Biology I (4 credits), and a D in Physical Education (2 credits). Assuming A 4 grade points, B 3 grade points, C 2 grade points, D 1 grade point, and F 0 grade points, find the student's grade point average.

6. Draw three types of distribution, right skewed, left skewed and normal

7. Find the sample variance and standard deviation for the amount of European auto sales for a sample of 6 years shown. The data are in millions of dollars. 11.2, 11.9, 12.0, 12.8, 13.4, 14.3

8. What is Chebyshev's Theorem?

9. The mean price of houses in a certain neighborhood is \$50,000, and the standard deviation is \$10,000. Find the price range for which at least 75% of the houses will sell

10. A survey of local companies found that the mean amount of travel allowance for executives was \$0.25 per mile. The standard deviation was \$0.02. Using Chebyshev's theorem, find the minimum percentage of the data values that will fall between \$0.20 and \$0.30.

11. What is Empirical (Normal) Rule? What is the difference between Chebyshev's Theorem and Empirical (Normal) Rule

12. A student scored 65 on a calculus test that had a mean of 50 and a standard deviation of 10; she scored 30 on a history test with a mean of 25 and a standard deviation of 5. Compare her relative positions on the two tests

13. Find the z score for each test, and state which is higher.

Test A	X = 38, Mean = 40, SD 5
Test B	X = 94, Mean = 100, SD 10

14. A teacher gives a 20-point test to 10 students. The scores are shown here. Find the percentile rank of a score of 12.
 18, 15, 12, 6, 8, 2, 3, 5, 20, 10