1) A pistol was aimed directly at a bullseye by bore-sighting. A sample of ten bullets was then fired at the target and the distances by which they missed the bullseye were measured. The misses in millimeters were: 5, 3, 6, 0, 1, 8, 3, 4, 3, 7. For the misses, find the
A. median  
B. range  
C. mean  
D. mode  
E. variance  
F. standard deviation  
G. 1st and 3rd quartiles  
H. Interquartile range  
I. Mean Absolute Deviation

2) To measure the extent of decline in house prices in a city in Florida, researchers chose a sample of 13 houses and found the following percentage changes in prices (as measured by standard appraisal techniques): −5, −22, −7, +2, −10, −25, −12, +1, −9, −25, −4, 0, −15. For this data, find the
A. median  
B. range  
C. mean  
D. mode  
E. variance  
F. standard deviation  
G. 1st and 3rd quartiles  
H. Interquartile range

3) A skier made six runs down a racing slope with the following times in seconds: 73, 61, 52, 55, 56, 59. For her times down the slope, find the
A. median  
B. range  
C. mean  
D. mode  
E. variance  
F. standard deviation  
G. 1st and 3rd quartiles  
H. Interquartile range  
I. Mean Absolute Deviation

4) At Amalgamated Rat Trap, the Human Resources Department recorded the bonuses given to all their mid-level managers. The amounts in dollars were: 2000, 5000, 0, 3000, 4000, 0.
A. median  
B. range  
C. mean  
D. mode  
E. variance  
F. standard deviation
G. 1st and 3rd quartiles  
H. Interquartile range

5) As measured by the coefficients of variation, which of the data sets above displays the greatest variability?

6) For the data in question 1, calculate the standardized values of the variable.  
A. According to Chebyshev’s Theorem, what proportion of these misses should be within two standard deviations of the mean?  
B. Does this data set confirm Chebyshev’s Theorem?  
C. Would this data conform to the proportions suggested by the Empirical Rule? Might we conclude that the scattering of bullet strikes conforms to a normal distribution (bell-shaped curve)?

7) For the data in question 2, calculate the standardized values of the variable.  
A. According to Chebyshev’s Theorem, what proportion of these declines should be within 1.5 standard deviations of the mean?  
B. Does this data set confirm Chebyshev’s Theorem?  
C. Would this data conform to the proportions suggested by the Empirical Rule? Might we conclude that the decline in house prices conforms to a normal distribution (bell-shaped curve)?