GMAT -- (3) PDF

. (DESCRIPTIVE STATISTICS) 1. (AVERAGE OR ARITHMETIC MEAN) 2. (MEDIAN) TO CALCULATE THE MEDIAN OF N NUMBERS FIRSTSGROUPSTHE NUMBERS FROM LEAST TO GREATEST IF N IS ODD THE MEDIAN IS DEFINED AS THE MIDDLE NUMBER WHILE IF N IS EVEN THE MEDIAN IS DEFINED AS THE AVERAGE OF THE TWO MIDDLE NUMBERS. FOR THE DATA 6, 4, 7, 10, 4, THE NUMBERS, IN ORDER, ARE 4, 4, 6, 7, 10, AND THE MEDIAN IS 6, THE MIDDLE NUMBER. FOR THE NUMBERS 4, 6, 6, 8, 9, 12, THE MEDIAN IS (6 8)/2 = 7. NOTE THAT THE MEAN OF THESE NUMBERS IS 7.5. 3. (MODE) THE MODE OF 7 9 6 7 2 1 IS 7 4. (RANGE) THE RANGE OF 1 7 27 27 36 IS 36-(-1)= 37 5. (STANDARD DEVIATION) ONE OF THE MOST COMMON MEASURES OF DISPERSION IS THE STANDARD DEVIATION. GENERALLY SPEAKING, THE GREATER THE DATA ARE SPREAD AWAY FROM THE MEAN, THE GREATER THE STANDARD DEVIATION. THE STANDARD DEVIATION OF N NUMBERS CAN BE CALCULATED AS FOLLOWS: (1)FIND THE ARITHMETIC MEAN . (2)FIND THE DIFFERENCES BETWEEN THE MEAN

AND EACH OF THE N NUMBERS . (3)SQUARE EACH OF THE DIFFERENCES . (4)FIND THE AVERAGE OF THE SQUARED DIFFERENCES . (5)TAKE THE NONNEGATIVE SQUARE ROOT OF THIS AVERAGE. NOTICE THAT THE STANDARD DEVIATION DEPENDS ON EVERY DATA VALUE, ALTHOUGH IT DEPENDS MOST ON VALUES THAT ARE FARTHEST FROM THE MEAN. THIS IS WHY A DISTRIBUTION WITH DATA GROUPED CLOSELY AROUND THE MEAN WILL HAVE A SMALLER STANDARD DEVIATION THAN DATA SPREAD FAR FROM THE MEAN.

100Test

www.100test.com