



In these activities you will work together to use the mean absolute deviation to describe the deviation from the mean. After completing each activity, discuss and/or present your findings to the rest of the class.



### Activity 1 [Page 1.3]

1. Create a distribution of the number of goals each team scored so that the total number of goals remains 54, and the following conditions hold: Each of the teams scored at least 1 goal, no team scored more than 10 goals during the tournament, and you know that:

Select one of the following conditions (or your teacher will assign):

- a. One team scored 6 goals, and another team scored 9 goals.
- b. Two teams scored 10 goals.
- c. No team scored 6 goals, and one team scored 3 goals.
- d. Three teams scored 1 goal; at least two teams scored 9 goals.
- e. No team scored 6 goals; three teams scored 1 goal.
- f. Two teams scored 6 goals; two teams scored 8 goals.
- g. Two teams scored only 1 goal; three teams scored 10 goals.







3. The MAD is often described as the typical distance of a data value *from the mean*. This is the interval between the mean minus the MAD and the mean plus the MAD, i.e., mean  $\pm$  MAD.
  - a. If the mean is 5 and the MAD is 2, describe the interval 1 MAD from the mean.
  
  
  
  
  
  
  
  
  
  
  - b. If one MAD from the mean is the interval from 5 to 11, what is the mean? The MAD? Explain how you found your answer.



### Activity 4 [Page 3.2]

1. Reset and choose Data Set 3 for the number of correct points for students in four classes from a different school. Rank these classes in terms of the number of correct points. Give reasons for your ranking.