SKILL DRILL WARM-UP ACTIVITY

Express each comparison as a ratio:
(Remember: Always express ratios in simplest form!)

45 cars to 36 vans:

9 boys to 27 girls:

44 ft in length to 20 ft in width:

Convert from ratios to decimals:

5 to 7 ____ 36:12 ____

$\frac{9}{15}$ ____ 75 to 100 ____

Convert from decimals to percent.

.008 = ___% .08 = ___%

.8 = ___% 8 = ___%

Data Collection Worksheet

Name: _____

Collect all necessary data and record in the table below.

I. Group Data

Group Number	1	2	3	4	5	6	7	8
# Problems attempted per group								
# Problems correct per group								
# Boys in each group								
# Girls in each group								

II. Class Data

# Boys in the class	
# Girls in the class	
# Boys in the top 3 groups	
# Girls in the top 3 groups	
# Problems attempted in the class	
# Problems correct in the class	

Ratios of Data Collected

Questionnaire

Name: _____

1. What is the ratio of number of problems correct to number of problems attempted in your group?_____

2. What is the ratio of number of problems correct to number of problems attempted in the class? _____

3. What is the ratio of boys to girls in your group?

_____

4. What is the ratio of girls to boys in your group?

_____

5. What is the ratio of the boys to the class?

_____

6. What is the ratio of the girls to the class?

_____

7. What is the ratio of boys to girls in the top 3 groups?

_____

8. What is the ratio of girls to boys in the top 3 groups?

_____

9. What is the ratio of girls in top 3 groups to the class?

_____

10. What is the ratio of boys in top 3 groups to the class?

_____

Statistics Worksheet

Name _____

Refer to the Ratios of Data Collected and complete the statistics in the table below.

Group Data	Ratio	Decimal	Percent
Ques. #1 Problems correct to attempted			
Ques. #3 Boys to group			
Ques. #4 Girls to group			
Ques. #7 Boys in top 3 groups			
Ques. #8 Girls in top 3 groups			

Collect the percentages from Question #1 only.

	Group Number							
Class Data:	1	2	3	4	5	6	7	8
Question #1 ~% only~								

Statistics Worksheet page 2

Refer to the Ratios of Data Collected and complete the statistics in the table below.

Class Data	Ratio	Decimal	Percent
Ques. #2 Problems correct to attempted			
Ques. #5 Boys to class			
Ques. #6 Girls to class			
Ques. #9 Girls in top 3 groups to class			
Ques. #10 boys in top 3 groups to class			

Refer to the number of problems correct for each group and answer the following questions:

What is the *mean* score for the class? _____

What is the *median* score for the class? _____

What is the *mode* score for the class? _____

Statistically Lyrical Summary

Name: _____ Date: _____

Refer to the handouts completed as a result of the data collection. As a group answer the questions below.

Part 1 Describe

1. Why do you think it is important to collect data?

2. Write a **description** of the strategies used in the data collection of The Math Poet activity.

Part 2 Analyze

3. How was the data **analyzed**? Be specific and include the various distinguishing parts that were included in the tables.

4. Give examples of data analysis from your Statistics Work Sheet.

Part 3 Generalize

5. **Generalize** about the data collected as to the involvement of every member of the group and class.

6. How was the data organized? Why is this a good method?

Part 4 Calculate

7. Show how the measures of **central tendency** were calculated?

8. What is the most meaningful type (measure) of describing the data you collected and why?

Statistically Lyrical Summary

Answer Key

NOTE: This serves only as a suggestion for possible answers. This suggests main points that the teacher might look for while formatively assessing students. Answers will vary according to the data collected by the students.

Part 1 Describe

1. Why do you think it is important to collect data?
   Data collection is a means of information exchange and ultimately leads to knowledge. It is used for statistical purposes and becomes relevant to the decision making process. Statistical methods are used in a wide variety of occupations and help people identify, study, and solve many complex problems.

2. Write a **description** of the strategies used in the data collection of The Math Poet activity.
   Cooperative groups allowed students to work together gathering information relative to each group and the class as a whole. Active engagement provided opportunities for students to participate in discussions and move about the room. Handouts provided students with a means to organize the data collected.

Part 2 Analyze

3. How was the data **analyzed**? Be specific and include the various distinguishing parts that were included in the tables.
   The Statistics Work Sheet provided the opportunity for students to relate to the information gathered in the form of ratios, decimals, and percent.

4. Give examples of data analysis from your Statistics Work Sheet.
   For example only:
   Question #1 Problems correct to attempted: 8 correct out of 10 attempted
   Ratio (Fraction): 8/10 or 4/5
   Decimal: .8 or .80
   Percent: 80%

Part 3 Generalize

5. **Generalize** about the data collected as to the involvement of every member of the group and class.
   A runner was designated by each group to collect data, return to the respective group and share that data. All data collected was included on each group member's Data Collection Work Sheet.

6. How was the data organized? Why was this a good method?
   The data was organized in a table format. This allowed information to become readily visible without extraneous information.

Part 4 Calculate

7. Show how the measures of **central tendency** were calculated?

Example only:

Group	1	2	3	4	5	6	7	8
Correct Responses	3	5	4	8	8	7	9	6

Mean: Average of all the scores. Sum divided by number of groups. 50/8 = **6.25**

Median: Arrange the scores in order from least to greatest. Find the number in the middle or the average of the two numbers in the middle.

3, 4, 5, (6, 7) , 8, 8, 9 6 + 7 = 13 13/2 = **6.5**

Mode: Find the number in the series of correct responses that is the most repeated.

3, 4, 5, 6, 7, (8, 8) , 9 Most repeated is **8**.

8. What is the most meaningful type (measure) of describing the data you collected and why?

It should be obvious to students that the mode in this case is not the most meaningful. Only two groups out of the eight had correct responses this high. A choice of either the mean or the median would be indicative of an average number of correct responses.