Name _____   Date _____   Class _____

MATH SKILLS

What Is an Average?

Suppose that your class is doing an experiment to determine the boiling point of a particular liquid. Working in groups, your classmates come up with several answers that are all slightly different. Your teacher asks you to determine which temperature best represents all of the varying results from the class. A mathematical tool called an **average,** or *mean,* will help you solve the problem. An average allows you to simplify a list of numbers into a single number that *approximates* the value of all of them. Check it out!

PROCEDURE: To calculate the average of any set of numbers, first add all of the numbers to find the sum. Then divide the sum by the amount of numbers in your set. The result is the average of your numbers.

SAMPLE PROBLEM: Find the average of the following set of numbers:

$$5, 4, 7, 8$$

Step 1: Find the sum.

$$5 + 4 + 7 + 8 = \mathbf{24}$$

Step 2: Divide the sum by the amount of numbers in your set. Because there are four numbers in your set, divide the sum by 4.

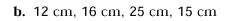$$24 \div 4 = 6 \; or \; \frac{24}{4} = \mathbf{6}$$

The average of the numbers is **6.**

Practice Your Skills!

Be sure to show your work for the following problems:

1. Find the average of each of the following sets of numbers.

  a. 19 m, 11 m, 29 m, 62 m, 14 m

  _____

  _____

  b. 12 cm, 16 cm, 25 cm, 15 cm

  _____

  _____

  c. 31°C, 42°C, 35°C, 38°C, 59°C

  _____

  _____

▲ MATH SKILLS

What Is an Average? continued

Use the data in the tables to complete the following problems. Be sure to show your work.

Height of Students (cm)

Students	Grade 6	Grade 7	Grade 8	Grade 9
Gretchen	152	156	159	163
Dylan	151	152	157	162
Sergio	144	147	150	152

2. Calculate the average of Gretchen's and Dylan's heights in the 8th grade.

_____

_____

3. What is the average height of all three students in Grade 6?

_____

_____

Number of Wildfires in 1993–1996

Year	Arizona	New Mexico	Oklahoma	Texas
1993	10	7	17	85
1994	16	11	24	84
1995	12	5	7	72
1996	13	5	37	91

4. What was the average number of wildfires to occur annually in New Mexico for the years 1993–1996?

_____

_____

5. What was the average number of wildfires for all four states in 1995?

_____

_____

6. What was the average number of wildfires to occur annually in Texas for the years 1993–1996?

_____

_____