



## 20.1 Averaging

**READ**

The most common type of average is called the mean. To find the mean, just add all the data, then divide the total by the number of items in the data set. This type of average is used daily by many people; teachers and students use it to average grades, meteorologists use it to average normal high and low temperatures for a certain date, and sports statisticians use it to calculate batting averages, among many other things.

**EXAMPLE**

Seven students in Mrs. Ramos' homeroom have part time jobs on the weekends. Some of them baby sit, some mow lawns, and others help their parents with their businesses. They all listed their hourly wages to see how their own pay compares to that of the others. Here is the list: \$11.00, \$4.50, \$12.20, \$5.25, \$8.77, \$15.33, \$5.75. What is the average (mean) hourly wage earned by students in Mrs. Ramos' homeroom?

1. Find the sum of the data:  $\$11.00 + \$4.50 + \$12.20 + \$5.25 + \$8.77 + \$15.33 + \$5.75 = \$62.80$
2. Divide the sum (\$62.80) by the number of items in the data set (7):  $\$62.80 \div 7 \approx \$8.97$
3. Solution: The average hourly wage of the students in Mrs. Ramos' homeroom is \$8.97.

**PRACTICE**

1. Jill's test grades in science class so far this grading period are: 77%, 64%, 88%, and 82%. What is her average test grade so far?
2. The total team salaries in 2005 for teams in a professional baseball league are as follows: Team One, \$63,015,833 (24 players); Team Two, \$48,107,500 (24 players); Team Three, \$81,029,500 (29 players); Team Four, \$62,888,192 (22 players); Team Five, \$89,487,426 (18 players). What is the average amount of money spent by a team in this league on players salaries in 2005?
3. During a weekend landscaping job, Raul worked 8 hours, Ben worked 15 hours, Michelle worked 22 hours, Rosa worked 5 hours, and Sammie worked 15 hours. What was the average number of hours worked by one person during this landscaping job? If each worker was paid \$12.00 an hour, what was the average pay per person for the job?
4. The 8th grade girls basketball team at George Washington Carver Middle School played the team from Rockwood Valley Middle School last night. The Rockwood Valley team won, 53-37. Altogether, there were three girls who scored 11 points each, four who scored 8 points each, one who scored 6 points, two who scored 4 points each, four who scored 2 points each, three who scored one point each, and two girls who did not score at all. What is the average number of points scored by a player on either team?
5. During a weekend car trip that covered 220 miles each way, Rowan kept track of the price per gallon of regular unleaded gasoline at different gas stations along the way. Here is the list he kept: \$2.79, \$3.23, \$3.99, \$2.89, \$3.09, \$2.99, \$2.97, \$3.11, \$2.88, \$3.01, \$3.00, \$2.99. What was the average price per gallon of gas among the different gas stations on the list?