

◆ **Homework Check: 3-4**◆ **Note: Statistical Literacy**

Remember that equivalent ratios are just another name for equivalent fractions. Mean is calculated by adding up all the entries and dividing by the total number of entries. The mode of a set of data is the entry that appears the most. The median is the middle number of all the entries once the entries have been ordered from smallest to largest. If two numbers appear in the middles, the average is the median number. The range of the data is the largest subtract the smallest number. Each of these measures is called a *measure of central tendency*.

Percent increase and percent decrease are words and measures used to describe how quantities, usually prices, have changed over time. These increase or decrease is usually compared to the original value. For example, if a pair of running shoes cost \$89.99 but is discounted to \$74.99, what is the percent decrease?

*for this calculation, we want to write the discount as a percent of original cost

$$\begin{aligned}\frac{89.99 - 74.99}{89.99} \times 100 &= \\ &= \frac{15}{89.99} \times 100 \\ &= 16.67\%\end{aligned}$$

The price was decreased by about 16.7%.

◆ **Homework: 3-5 Statistical Literacy**

Lesson : 3-5 Statistical Literacy

1. Thirty people tasted a new brand of cheese. Twenty of them liked the taste.

a) What is the ratio of those who liked the taste to the total number who tried it?

b) Write an equivalent ratio with each second term:

i) 6

ii) 100

2. There are 700 students enrolled in a high school. The ratio of girls to boys is 4:3.

a) How many boys are there in the school?

b) How many girls are there in the school?

c) The average class size in the school is 28 students. How many students in the class are boys?

3. The height in metres of tree in a woodlot are:

18.0 21.3 17.1 23.5 19.8 17.9 17.0 21.5 19.2 19.0 20.6 19.5

Calculate the following measures of central tendency. **(6 marks)**

a)What is the median?

b) What is the mean?

c) What is mode?

d) What is the range?

4. The population of a city was 18 500 last year. This year the population if 21 300. What is the percent increase in population?

5. Ms. Peekaboo is trying to sell her house for \$325 000. When it did not sell after a few month, she reduced the price to \$298 000. What is the percent decrease in price?

6. Find the unknown in each ratio. Round to 1 decimal place. (2 marks each)

a) $\frac{4}{9} = \frac{25}{x}$

b) $\frac{2}{5} = \frac{x}{32}$

c) $\frac{4}{x} = \frac{30}{17}$

d) $\frac{x}{3} = \frac{250}{400}$

7. The local greenhouse sells plants at varying prices. Chrysanthemums are usually sold in bunches of 4 early in the season for \$8.99. Once the plants have matured and been repotted, 1 chrysanthemum is sold for \$12.99. What is the percent increase in the price of 1 chrysanthemum? (4 marks)