

Assignment 4

Math 1030

Due Friday, September 21st

Name: _____

1. Basic Percentages

In each statement below, express the the number as a percentage of the second. (Problems 55 - 59 of section 3A in the textbook).

- (a) 220 men at a conference with 430 people.
- (b) 123 varsity student athletes in a graduating class of 569.
- (c) 145 Subarus in a parking lot with 436 cars.
- (d) 190,000 people under 18 out of 807,000 people in Delaware.
- (e) 2.8 million people over 65 out of 16.7 million people in Florida.
- (f) 100,500 Native Americans out of 643,800 people in Alaska.

2. Percentage Differences

Find the absolute and relative difference (as a percentage) in each case. Assume that the first quantity is the compared value and the second quantity is the reference value. (Problems 67 - 70 in section 3A of the textbook.)

- (a) The daily circulation of *USA Today* is about 2.20 million (the largest in the country). The daily circulation of the *New York Times* is about 1.12 million (the third largest in the country).

Bonus Point - What newspaper has the second largest circulation in the United States?

- (b) In a recent year, the United States made \$12.1 billion in international arms sales (46% of the total) and Russia made \$5.8 billion in arms sales (22% of the total).
- (c) In 2004, France ranked as the number one tourist destination, with about 77 million international arrivals. Spain ranked second, with about 50 million international arrivals.
- (d) In 2003, Saudi Arabia produced 8.8 million barrels of crude oil per day, while the United States produced 5.7 million barrels per day.

3. Scientific Notation

Express each of the following numbers in scientific notation. (Question 28 from section 3B of the textbook.)

- (a) 4327
- (b) 984.35
- (c) 0.0045
- (d) 624.87
- (e) 0.1357
- (f) 98.18004

4. Units Review with Scientific Notation

Note - Not all information needed for these conversions is provided. You might need to look some of it up.

- (a) One astronomical unit is the approximate average distance from the Sun to the Earth. It is 149.6 million km. Express this distance in inches using scientific notation.
- (b) Distances inside the atom are measured in terms of angstroms. One angstrom is one ten-billionth of a meter. Express one angstrom in terms of miles using scientific notation.