

**MAT 108-03**  
**Spring 2008**

**Assignment 5 (Section 4.5)**

**This is a review assignment.** We will not go over it in class but you are welcome to stop by my office for help with the problems.

A. In Algebraic Aerobics 4.5a on pp. 222-223, do the following problems:

1, 2, 3, 4, 5, 6ad, 9

B. In Algebraic Aerobics 4.5b on p. 224, do the following problems:

1, 2ad, 3b, 5

**Assignment 6**

Some drugs are administered in doses proportional to the surface area of the body. If  $h$  represents a person's height in centimeters and  $w$  represents the person's weight in kilograms, the following formula gives an approximation for the surface area  $A$  of the body in square centimeters ( $\text{cm}^2$ ). It is called *DuBoise's formula*.

$$A = 71.84 h^{29/40} w^{17/40}$$

Note that  $\frac{29}{40}$  and  $\frac{17}{40}$  are exponents.

Calculate the approximate surface area  $A$  for a person 162.6 cm tall and 46.4 kg in weight.

**Assignment 7 (Section 4.4)**

In Algebra Aerobics 4.4 on pages 217-218, do the following problems:

1, 2, 3, 4, 6, 8, 9, 10, 13a

**Assignment 8 (Section 4.4)**

p. 242-244

67, 73, 89

**Assignment 9**

A. Convert  $14.7 \text{ lb./in}^2$  to pascals, using the following conversion factors and units:

Pa - pascal (SI unit of pressure)

N - newton (SI unit of force)

$$1 \text{ Pa} = 1 \text{ N/m}^2$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ lb.} = 4.448 \text{ N}$$

$$1 \text{ in.} = 2.54 \text{ cm}$$

B. **To be turned in** : Convert  $62.4 \text{ lb./ft}^3$  to kilograms per cubic meter ( $\text{kg/m}^3$ ), using

$1 \text{ kg} = 2.205 \text{ lb}$  and any other appropriate conversion factors.