

Homework #2. Due, class time 2/3

1. A parallelepiped (a six-sided shape with three pairs of parallel, parallelogram faces) has edges given by the three vectors  $\mathbf{a}=(2,3,4)$ ,  $\mathbf{b}=(1,2,3)$  and  $\mathbf{c}=(4,2,1)$ . What is the volume of the parallelepiped?

2. Consider two vectors  $\mathbf{a}=(2,3,5)$ ,  $\mathbf{b}=(3,2,3)$ .

a) What is the cosine of the angle between them?

b) What is the angle between the plane defined by these two vectors, and the  $x_1$  axis?

3. Marion and Thornton, question 1-29.

4. Marion and Thornton, question 1-38