

**Homework 2 problems (due Friday February 1 at 6pm).**

12.2 1, 4, 7, 13, 19, 27, 39, 43, 47, 53, 54

12.3 1, 3, 6, 8, 14, 16

12.4 2, 3, 6, 13, 14

$\alpha$ ) For what number  $\epsilon$  will the triangle determined by  $(\epsilon, 2\epsilon, 3\epsilon)$ ,  $(\epsilon, 4\epsilon, 9\epsilon)$ , and  $(\epsilon, 8\epsilon, 27\epsilon)$  have an area of 1734?

$\beta$ ) What does the scalar triple product  $\vec{a} \cdot (\vec{b} \times \vec{c})$  measure?

If  $\vec{a} \cdot (\vec{b} \times \vec{c}) = 0$ , then what does that say about the vectors  $\vec{a}$ ,  $\vec{b}$ , and  $\vec{c}$ ?