

Økonomisk institutt
Arne Strøm
September 2004

**Oppgaver til seminarene i ECON 3120/4120 Matematikk 2
i uken 27. september—1. oktober 2004**

MA I: 10.9.3(a).

LA: 2.1.5, 2.1.6, 2.1.8, 2.1.9, 2.2.4, 2.3.2, 2.3.3, 2.4.2, 3.2.4(a),(d), 3.2.6.

Eksamensoppgaver: 53(a),(b), 77, 137.

**Seminar problems in ECON 3120/4120 Mathematics 2
for the week 27 September—1 October 2004**

EMEA: 9.7.3(a), 15.7.3, 15.7.4, 15.7.5, 15.7.6, 15.7.8, 15.8.2, 15.8.4, 15.3.1(a),(d), 15.3.5, and 2.4.2 from LA.

Problem 2.4.2 in LA is not in EMEA, so here is a translation of it:

LA, 2.4.2: Let $\mathbf{a} = (-1, 2)$ and $\mathbf{b} = (3, 1)$.

(a) Calculate $\|\mathbf{a}\|$, $\|\mathbf{b}\|$, and $\|\mathbf{a} + \mathbf{b}\|$. Explain geometrically why $\|\mathbf{a}\| + \|\mathbf{b}\|$ is not equal to $\|\mathbf{a} + \mathbf{b}\|$.

(b) Calculate $\mathbf{a} \cdot \mathbf{b}$, and check whether the Cauchy—Schwarz inequality holds.

Exam problems: 53(a),(b), 77, 137.