

Exam exercises - Linear systems**Problem 1.****Exam MET1180 (December 2022) Exercise 1**

We consider a linear system with parameter a given by

$$\begin{array}{rcccccc} 2x & + & 9y & + & 5z & - & 9w & = & 7 \\ 4x & + & ay & + & 10z & - & 18w & = & 22 \\ x & + & 5y & + & 2z & - & 2w & = & 3 \end{array}$$

- a. **(6p)** Solve the linear system when $a = 22$.
- b. **(6p)** Determine the values of a such that the linear system is consistent.

For a complete solution manual, see Eksamen MET1180 12/2022, Oppgave 1.

Optional: Exercises from the Norwegian textbook

Textbook [E]: Eriksen, *Matematikk for økonomi og finans*

Exercise book [O]: Eriksen, *Matematikk for økonomi og finans - Oppgaver og Løsningsforslag*

Exercises: [E] 6.3.1 - 6.3.7

Solution manual: See [O] Kap. 6.3
