## Model-based Decision Support

Exam 7 (homework) Enrolment number:
May, 2013

The Management of the chain of stores Doberhams has taken the following 3 Outputs and 2 Inputs as crucial for efficiency measuring of their branches:
(O) Sales (sold articles)
(I) Employees (full time equivalent)
(O) Total Revenue (unit $£$ )
(I) Sales Area (unit $100 \mathrm{~m}^{2}$ )
(O) Profits (unit $£$ )

Data collection yields the following operating figures:

| Store | (I) Employee | (I) Area | (O) Sales | (O) Revenue | (O) Profits |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Doberhams A | $1 X$ | 20 | 700 | 6000 | 700 |
| Doberhams B | $1 Y$ | 15 | 1000 | 12000 | 1700 |
| Doberhams C | 20 | 30 | 800 | 11000 | 1900 |
| Doberhams D | 25 | 15 | 1200 | 23000 | 2600 |
| Doberhams E | $1 Z$ | 9 | 900 | 18000 | 4000 |
| Doberhams F | 13 | 32 | 1400 | 14000 | 3100 |
| Doberhams G | 16 | 24 | 1200 | 12000 | 3200 |

For X use the last digit of your student enrolment number, Y the last but one digit, and Z the last but two.

Use MS Excel and DEA to compute efficiency (technical but not mixed or scale) of these branches of Doberham. Copy your spreadsheet to a piece of paper and add a verbal description of your results. Your submission should be handed in at the next class on May $23^{\text {rd }}$.
(In case that you don't have access to MS Excel contact me, and I provide you a working place at our computer lab).

