

## HW02: Math and linear regression

Hand in at: <http://www.cs.utah.edu/~hal/handin.pl?course=cs5350>. Remember that only PDF submissions are accepted. We encourage using L<sup>A</sup>T<sub>E</sub>X to produce your writeups. See `hw01.tex` for an example of how to do so. You can make a `.pdf` out of the `.tex` by running “`pdflatex hw02.tex`”.

## 1 PRML Exercises

- 1.3
- \*1.9
- 1.11 (6350 only)
- \*1.36
- 1.40<sup>1</sup>
- 2.1
- 2.8 (6350 only)
- \*3.3

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<sup>1</sup>The arithmetic mean of  $x_1, \dots, x_N$  is  $\frac{1}{N} \sum_n x_n$ ; the geometric mean is  $(\prod_n x_n)^{1/n}$ . (You'll have to assume all the  $x_n$ s are strictly positive.) See wikipedia for more intuition.