

Problem set 1

1 *Standard problems*

From the IA Examples sheet: problems 1, 2c, 2d, and 5.

2 *Estimation*

- a) How many English words can you recognise?
- b) How many pieces of mail does the UK postal system carry each day? Estimate the annual (monetary) turnover of the Royal Mail; check your estimate by looking up a recent Royal Mail budget.

3 *Number sense*

Without a calculator, estimate

- a) $\sqrt{1.3}$
- b) $\sqrt[3]{1.6}$
- c) $\sin 7$ (radians!)
- d) 1.01^{100} (Hint: What is $\ln 1.01$?)