## Significant figures worksheet

1. Round off the following numbers to three significant figures:
a) 35.234
b) 2.34521
c) 0.035219
d) 2533521
e) 6255520000
2. Give the largest and smallest value of the approximate number $35.21 \pm 0.02 \mathrm{~g}$
3. Five different voltmeters are used to measure the voltage in a circuit. Given that the following measurements are made, determine the average and uncertainty.
$25.61 \mathrm{~V}, 25.63 \mathrm{~V}, 25.65 \mathrm{~V}, 25.64 \mathrm{~V}, 25.63 \mathrm{~V}$
4. Complete the following computations:

| $\begin{aligned} & 26.215-0.3 \\ & = \end{aligned}$ | $\begin{aligned} & 65.222+1.03 \\ & = \\ & \hline \end{aligned}$ | $\begin{aligned} & 22-0.01 \\ & = \end{aligned}$ |
| :---: | :---: | :---: |
| $\begin{aligned} & 10+0.1 \\ & = \\ & \hline \end{aligned}$ | $\begin{aligned} & 33.3+0.35 \\ & = \end{aligned}$ | $\begin{aligned} & 29.39+0.2 \\ & = \end{aligned}$ |
| $\begin{array}{llll} 25 & x & 3 \\ = & & \end{array}$ | $\begin{aligned} & 3.35 \times 0.26 \\ & = \\ & \hline \end{aligned}$ | $\begin{aligned} & 799 \times 877 \\ & = \\ & \hline \end{aligned}$ |
| $\begin{aligned} & \left(6.2 \times 10^{3}\right)\left(3.55 \times 10^{12}\right) \\ & = \end{aligned}$ | $\begin{aligned} & \frac{\left(6.3 \times 10^{7}\right)\left(2.51 \times 10^{-7}\right)}{\left(3.214 \times 10^{-5}\right)} \\ & = \end{aligned}$ | $\begin{aligned} & \frac{\left(7.52 \times 10^{16}\right)\left(3.1 \times 10^{12}\right)}{\left(2.5 \times 10^{-7}\right)} \\ & = \end{aligned}$ |
| $\begin{aligned} & 25.31+6.4 \\ & = \end{aligned}$ | $\begin{aligned} & 22.0+0.04 \\ & = \end{aligned}$ | $\begin{aligned} & 35.271+0.2 \\ & = \end{aligned}$ |
| $\begin{aligned} & 25.217+0.017+0.25-0.177 \\ & = \\ & \hline \end{aligned}$ | $\begin{aligned} & 51.71 \times 22.3 \\ & = \end{aligned}$ | $\begin{aligned} & 22.7+0.77 \\ & = \end{aligned}$ |
| $\begin{aligned} & 3.5 \times 10^{2} \div 3.1 \times 10^{3} \\ & = \\ & \hline \end{aligned}$ | $\begin{aligned} & \frac{\left(2.00 \times 10^{23}\right)\left(3.51 \times 10^{-22}\right)\left(3.5 \times 10^{3}\right)}{\left(7.5 \times 10^{-3}\right)\left(3.511 \times 10^{12}\right)\left(6.6 \times 10^{-6}\right)} \\ & = \end{aligned}$ | $\begin{aligned} & 22 \times 305 \\ & = \\ & \hline \end{aligned}$ |

