Significant figures worksheet (answers)

1. Round off the following numbers to three significant figures:
   a) 35.234 _____**35.2**
   b) 2.34521 _____**2.35**
   c) 0.035219 _____**0.0352**
   d) 2 533 521 _____**2.53×10^6**
   e) 6 255 520 000 _____**6.26 x 10**

2. Give the largest and smallest value of the approximate number

   35.21 ± 0.02 g _____**35.19 to 35.23**

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 V, 25.63V, 25.65V, 25.64V, 25.63V **25.63± 0.02 V**

4. Complete the following computations:

26.215 - 0.3 = _____**25.9**	65.222 + 1.03 = _____**66.25**	22 - 0.01 = _____**22**
10 + 0.1 = _____**10**	33.3 + 0.35 = _____**33.7**	29.39 + 0.2 = _____**29.6**
25 x 3 = _____**8×10^1**	3.35 x 0.26 = _____**0.87**	799 x 877 = _____**7.01×10^5**
$(6.2 \times 10^3)(3.55 \times 10^{12})$ = _____**2.2×10^{16}**	$\frac{(6.3 \times 10^7)(2.51 \times 10^{-7})}{(3.214 \times 10^{-5})}$ = _____**4.9×10^5**	$\frac{(7.52 \times 10^{16})(3.1 \times 10^{12})}{(2.5 \times 10^{-7})}$ = _____**9.3×10^{35}**
25.31 + 6.4 = _____**31.7**	22.0 + 0.04 = _____**22.0**	35.271 + 0.2 = _____**35.5**
25.217 + 0.017 + 0.25 - 0.177 = _____**25.31**	51.71 x 22.3 = _____**1.15×10^3**	22.7 + 0.77 = _____**23.5**
$3.5 \times 10^2 \div 3.1 \times 10^3$ = _____**0.11**	$\frac{(2.00 \times 10^{23})(3.51 \times 10^{-22})(3.5 \times 10^3)}{(7.5 \times 10^{-3})(3.511 \times 10^{12})(6.6 \times 10^{-6})}$ = _____**1.4**	22 x 305 = _____**6.7×10^3**