

15. Perform the following calculations and express the answer in the correct number of significant digits or decimal places as justified by the data. Don't forget the rules for multiplication and division and for addition and subtraction. (0.000000800)

a)  $3.4587 \times 0.0112 = \underline{0.0387}$  b)  $5.600 \times 10^{-7} / 0.700 = \underline{8.00 \times 10^{-7}}$

c)  $8.6 + 0.4573 = \underline{9.1}$  d)  $3.2697 - 0.411 = \underline{2.859}$

e)  $(2.68 \times 10^3) + (1.229 \times 10^5) = \underline{1.256 \times 10^5}$  f)  $2.3 \times 10^{-7} \times 8.22298 = \underline{1.9 \times 10^{-6}}$

g)  $3.6437 \times 10^{-4} + 9.2103 \times 10^{-7} = \underline{3.6529 \times 10^{-4}}$

h)  $(5.2468 \times 0.923) + (3.00210 \times 1.9999) = \underline{10.85}$

$4.8427964 + 6.00389979$   
 3sd = 2dp 5sd = 4dp 2dp

i)  $(6.210 + 0.92)(3.75411 + 1.32410) = \underline{36.2}$

$(7.13)(5.07821)$   
 2dp = 3sd 5dp = 6sd 3sd

j)  $\frac{(222.115 - 4.56892)}{(32.98 - 25.22316)} = \frac{217.54608}{7.75684} = \underline{28.0}$   
 3dp = 6sd 2dp = 3sd 3sd