In physics, uncertainty designates the margin of imprecision on the value of the measurement of a? quantity.The relative uncertainty of a product or a quotient is equal to the sum of the relative measurement uncertainties: Z=XY –> ?Z/Z= ?X/X+ ?Y/Y Z=X/Y –> ?Z/Z ?= /X+ ?Y/Y.?In the case where we have a quantity Z which is a function of measurement X: Z= F(X), the absolute uncertainty of Z is equal to the derivative of the function multiplied by the absolute uncertainty of the measurement:Z= F (X) –> ?Z=F'(x) ?X where F'(X) is the derivative with respect to X. ?Absolute uncertainties are added for addition and subtraction.?This writing means that the true value of g is included in the interval: [g– ?g; g+ ?g] ?In the case where the uncertainty on a quantity is not explicitly given, we accept the level of the last significant figure as the order of magnitude of the uncertainty.1–3Principle of the 1/10th the vernier caliper For a precise measurement, a Vernier caliper is combined with the graduated ruler.L = 1.37 cm this means that L= (1.37 ?0.01) cm M = 350 Kg this means that M= (350+–1) Kg. Significant Digits In a physical measurement, the number of significant figures determines the accuracy of the measurement.?The devices used give a precision of around 0.1% to 0.2% : it is therefore illusory, in the experimental exercises, to hope for more than 03 significant figures.Rounding a number It is an approximate value of this number, obtained from its decimal expansion, by reducing the number of significant figures.This method limits the accumulation of errors during successive calculations.The ???. relative uncertainty is therefore 0.02 or 2%

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