

PHYS 500 (Research Methodology)

HOMEWORK I (30 marks)

Dr. Vasileios Lempesis

Hand in: Thursday 5th October 2017 at 23:59

1. Round the following recordings at the digit which is underlined:

Recorded Value	6.1 <u>0</u> 19	67 <u>2</u> 3	4. <u>9</u> 82	0.04 <u>5</u> 6	<u>8</u> .50
Rounded Value					

(5 marks)

2. Fill in the following table by keeping significant figures and rounding properly the recorded values taken in an experiment for a physical quantity:

	Before the selection of significant figures		After the selection of significant figures		Final Result
Recorded value	x	δx	δx	x	x
1	29.283	0.01856			
2	6.2	0.0212			
3	327.2679	0.6526			
4	22.339	0.168			
5	348	10.53			

(15 marks)

3. How many significant figures does the number 00234500 have?

a) 8 b) 3 c) 6 d) 4

(5 marks)

4. What is the correct result (in g) of the sum $1.235 \text{ kg} + 25,3 \text{ g} + 28,4568 \text{ mg}$?

a) 1260.328457 g b) 1260 g c) 1260.0 g d) 1260.3 g

(5 marks)