

MATH FOR PHYSICS – REVIEW ASSIGNMENT

/30**[6]** 1. Determine the number of significant digits.

Figure	Number of s.d.	Figure	Number of s.d.
12.4		10.005	
0.0056		0.03400	
250		1.00	

[12] 2. Round to the required number of significant digits. Write the final answer in scientific notation.

Original value	Required number of s.d.	Rounded value	Final answer in sc.n.
100.945 L	3		
0.0078 g	1		
24.6790 km	2		
3.095 m/s	3		
1000 N	2		
0.000450	3		

[3] 3. Convert to the base unit.

24.5 km/h	
154 cm ²	
32.8 μg	

[3] 4. Using your formula sheet. Express the following:

Mass of a proton in ng	
Mass of an electron in ng	
Unit (=elementary) charge in μC	

[3] 5. Express the vector $\vec{m} = 25 \text{ km } [S14^\circ E]$ in vector notation. Include a diagram.

[3] 6. Decompose the vector $\vec{z} = 15 \frac{\text{m}}{\text{s}} [NW]$ into its components. **Write the components as vectors.** Include a diagram.