PHYS 144 - Significant Figures Review

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Use the rules on pages 32 and 33 of the lab manual to complete these questions.

Counting Significant Figures

Write how many significant figures each of the following numbers has.

- 1. 51.6
- 3
- 3. 800
- 1
- 5. 920.2
- 4

- 2. 0.0020
- 2
- 4. 30.0
- 3
- 6. 0.94
- 2

Values and Uncertainties

Write the following values and their uncertainties to the proper place of significance and with the proper number of significant figures.

- 7. 34.42394
 - 34.4
- 0.928305
 - 0.9

- 10. 0.05389
 - 9
- 0.2984531

0.1

- 8. 7841.42
 - 7840
- \pm 38.109
 - 40
- 11. 90 90.00

6.8

 \pm 0.0245222

0.3

0.02

- 9. 100.09
 - 1.0×10^{2}
- \pm 20.5

 \pm

- 0.2×10^2
- 12. 6.8
- \pm
- 0.3 0.3

Proper Notation

Find the mistake(s), and then rewrite the following quantities in proper notation.

- 13. $34.5 \pm 0.8 \text{ cm}$
 - $(34.5 \pm 0.8) \text{ cm}$

15. $(1.4 \times 10^{-2} \pm 0.2 \times 10^{-1}) \text{ ms}^{-1}$ $(1 \pm 2) \times 10^{-2} \text{ ms}^{-1}$

- 14. $16 \text{ Bq} \pm 2 \text{ Bq}$
 - $(16 \pm 2) \text{ Bq}$

- 16. $61.39 (\pm 0.01) \text{ N}$
 - $(61.39 \pm 0.01) \text{ N}$