POWER Homeschool

Finding Significant Digits

For this assignment, your student will be asked to find how many significant digits are in a given number. Knowing the number of significant digits in a number is a useful skill to have for many physics concepts. Another part of this assignment is to find if a zero within a number is considered significant or not. To help with this, here are a few rules to determine if the zero is significant:

1. A zero is not significant if it is at the end of an integer unless there is a decimal point or a bar.
   a. 2500 has 2 significant digits
   b. $25\overline{0}0$ has 3 significant digits
   c. 2500. has 4 significant digits

2. A zero is not significant if it is at the start of a decimal.
   a. 0.00087 has 2 significant digits which are 8 and 7.

3. A zero is significant if it is at the end of a decimal.
   a. 0.000870 has 3 significant digits which are 8, 7, and 0.

4. A zero is significant if it is located between two other digits.
   a. 8.908 has 4 significant digits

Answer Key

1. 2 significant digits
2. 2 significant digits
3. 3 significant digits
4. 4 significant digits
5. 2 significant digits
6. 2 significant digits
7. 5 significant digits
8. 1 significant digit
9. 1 significant digit
10. 3 significant digits
11. 5 significant digits
12. 5 significant digits
13. 4 significant digits
14. 5 significant digits
15. 6 significant digits
16. 3 significant digits
17. 3 significant digits
18. 1 significant digit
19. 1 significant digit
20. 1 significant digit