

Finding Significant Digits

For this assignment, you 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. $25\bar{0}0$ 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

Questions

How many significant digits does each number have?

1. 99
2. -790
3. 888
4. 12.09
5. -7.0
6. 47000
7. 0.28749
8. 0.004
9. -3000
10. 5540
11. 5540.0
12. 2.0009
13. -0.003200
14. 0.20101
15. 1.02080
16. 0.00560
17. $99\bar{00}$
18. 80
19. 0.7
20. 2