

Operations with Significant Figures Guided Lesson Explanation

1) 0.001008

There are 4 significant digits in this value. All of the significant digits are underlined. There are two non-zero values, all the zeros between those values are also considered significant.

2) 81,008

There are 5 significant digits in this value. All of the significant digits are underlined. There are three non-zero values, all the zeros between those values are also considered significant.

3) 9,000

There is 1 significant digit in this value. All of the significant digits are underlined. There is 1 non-zero value. The trailing zeros are not considered significant without a decimal point present.

4) 0.0004

There is 1 significant digit in this value. All of the significant digits are underlined. There is 1 non-zero value. Preceding zeros are not considered significant.

5) $7.23 - 1.0073 =$

Step 1) Perform the difference: $7.23 - 1.0073 = 6.2227$

Step 2) Determine the number of significant digits that should be present in your final answer. We look at the values we used to find the difference. We write our final answer in the same number of significant digits as the lesser of those values.

7.23 has 3 significant digits and 1.0073 has 5 significant digits.

So our final answer needs to be in 3 significant digits (lesser of the two).

Step 3) Convert 6.2227 to 3 significant digits.

Our final answer will be: 6.22

