# Significant Digits Rules

1. All non-zero digits are significant

   52 **2** 813 **3** 7763 **4** 1.43 **3** 9 **1**

2. In a number with an **understood decimal point**: Zeros are significant only when it is between two non-zero digits.

   260 **2** 3004 **4** 40600 **3** 80 **1**

   705 **3** 900 **1**

3. In a number with a **decimal point**: Go to the first non-zero digit. This digit and every digit to its right is significant including zeros.

   0.3280 **4** 46.90 **4** 0.00077 **2** 4.008 **4**

   9.0 **2** 9.000 **4**

4. Multiplying/Dividing

   The number of significant digits in your answer will be the same as the number with the least significant digits in the number you are multiplying and dividing.

   15.0/41 = 0.3658536 ⇨ 0.37

   (280)(96)/4.100 = 6556.097561 ⇨ 6600

   462/81 = 5.7037037 ⇨ 5.7

5. Adding/Subtracting

   The number of significant digits may vary since you always round to the least exact position.

| | | |
|---|---|---|
| 2340 | 0.2984 | 0.056 |
| +1800 | -0.11 | -0.049 |
| 4140 | 0.1884 | 0.007 |
| 4100 | 0.19 | 0.007 |

- How Many Significant Digits?

  a) 443 **3** b) 210 **2** c) 9.600 **4**

  d) 0.0082 **2** e) 2.10 **3** f) 65.003 **5**

  g) 1.00450 **6** h) 40.890 **5**

- Calculate using Significant Digits

  a) 24/6.0 **2** b) 30.0 X 2.0 **2**

  c) 24/11 **2** d) 4.13 X 5.1 **2**

  e) 413 + 101 **ones** f) 413 + 101.2 **ones**

  g) 6500 - 1320 **hundreds** h) 4.43 – 0.6241 **hundredths**