

Significant Digits Examples

Addition and Subtraction

Round to:

$$\begin{array}{r} 12.4 \dots \\ + 15.78 \end{array}$$

$$\begin{array}{r} 167.34 \dots \\ + 947.3 \end{array}$$

$$\begin{array}{r} 495.367 \dots \\ + -37.24 \end{array}$$

$$\begin{array}{r} 1.73485 \dots \\ + 145.182 \dots \\ + 985.13 \end{array}$$

$$\begin{array}{r} 421 \dots \\ + 16.4865 \end{array}$$

$$\begin{array}{r} 231 \dots \\ + 17.54 \end{array}$$

$$\begin{array}{r} 232 \dots \\ + 17.56 \end{array}$$

Multiplication and Division:

$$2.3$$

$$45.3 \cdot 27.4$$

$$1.5487 \cdot 12.2$$

$$\frac{56.7}{3.4}$$

$$(1.465 \cdot 10^4) \cdot (4.68 \cdot 10^{-2})$$

Place two sticks end to end. The length of the first stick is measured with a meter stick as 59.3 cm. The second stick is measured with a micrometer as 5.4895 cm. What is the total length?

Change length of second stick to 5.1594 cm. What is the total length?

Measure the length of the first stick with a better ruler, as 59.394 cm. Now what is the length of the two sticks?

You are given a rectangular piece of metal. Using different devices you measure the following dimensions: Length 25.125 inches, Width 5.3 cm, Thickness 1.3458 mm. What is the volume of this piece?

Problem Solving. While driving across South Dakota, I looked down at the odometer in my truck and started a stop watch at the same time. The odometer read: 129356.4. Some time later I stopped the watch and looked at the odometer again. The odometer read: 129469.3 and the stopwatch read 94 min, 15.24 sec. What was my speed in miles per hour, kilometers per hour and meters per second?