

Sig figs Part 2

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An exact value (counted value) is considered to have infinite significant figures. \leftarrow no uncertainty

2 cats \leftarrow ∞ sig figs

Operations & sig figs

Addition / Subtraction

- ① line up the values for addition / subtraction
- ② Cut off the answer at the smallest place value that the numbers all have in common.

$$\begin{array}{r}
 29.32 \text{ ?} \\
 137.72861 \\
 + 12.1 \text{ ?} \\
 \hline
 179.1 \text{ ?} \\
 \hline
 179.1
 \end{array}$$

$$\begin{array}{r}
 720000 \\
 - 142.3 \\
 \hline
 719857.7
 \end{array}$$

~~720000~~ or 7.2×10^5

Multiplying / Dividing

The Answer has as many sig figs as the fewest number of significant figures.

$$\begin{array}{r}
 240 \rightarrow 2 \text{ sig figs} \\
 \times 12.37 \rightarrow 4 \text{ sig figs} \\
 \hline
 2968.8 \\
 \hline
 3000 \rightarrow 3.0 \times 10^3
 \end{array}$$

$$12 \div 14.723 = 0.82$$