

Measurement Ranking Tasks

Significant Figures I

Complete the following computations. Rank the answers from greatest to least number of significant figures.

A. $3.331 \div 1.098$

D. $9.066 - 8.72$

B. $2.045 + 1.9$

E. $(49.6 \times 23.45) + 1.115$

C. 881×0.00109

F. $(18.8 \div 2.2) - 7.911$

Greatest 1 A 2 C 3 E 4 B 5 D 6 F Least

Explain your reasoning below.

A. $3.331 \div 1.098 = 3.034 \therefore 4 \text{ digits}$

C. $3 \text{ digits} \times 3 \text{ digits yields } 3 \text{ digits}$

B.
$$\begin{array}{r} 2.045 \\ 1.9 \\ \hline \end{array} \rightarrow 2 \text{ digits}$$

D.
$$\begin{array}{r} 9.066 \\ 8.72 \\ \hline 0.346 \\ = 0.35 \Rightarrow 2 \text{ digits} \end{array}$$

E. $49.6 \times 23.45 = 1163.12 \rightarrow \text{only good to } 1160$

$$\begin{array}{r} 1163.12 \\ 1.15 \\ \hline \end{array} \rightarrow 3 \text{ digits}$$

F. $18.8 \div 2.2 = 8.5454... = 8.5$

$$\begin{array}{r} 8.545 \\ - 7.911 \\ \hline 0.634 \end{array} \text{ or } 0.6 \text{ 1 sig fig!}$$

Circle the response that best describes your confidence in your answer above.

(Basically Guessed) 1 2 3 4 5 (Positive you get it)