

CALCULATIONS USING SIGNIFICANT FIGURES

Name _____

When multiplying and dividing, limit and round to the least number of significant figures in any of the factors.

Example 1: $23.0 \text{ cm} \times 432 \text{ cm} \times 19 \text{ cm} = 188,784 \text{ cm}^3$

The answer is expressed as $190,000 \text{ cm}^3$ since 19 cm has only two significant figures.

When adding and subtracting, limit and round your answer to the least number of decimal places in any of the numbers that make up your answer.

Example 2: $123.25 \text{ mL} + 46.0 \text{ mL} + 86.257 \text{ mL} = 255.507 \text{ mL}$

The answer is expressed as 255.5 mL since 46.0 mL has only one decimal place.

Perform the following operations expressing the answer in the correct number of significant figures.

- $1.35 \text{ m} \times 2.467 \text{ m} = \underline{\hspace{2cm}}$
- $1,035 \text{ m}^2 + 42 \text{ m} = \underline{\hspace{2cm}}$
- $12.01 \text{ mL} + 35.2 \text{ mL} + 6 \text{ mL} = \underline{\hspace{2cm}}$
- $55.46 \text{ g} - 28.9 \text{ g} = \underline{\hspace{2cm}}$
- $.021 \text{ cm} \times 3.2 \text{ cm} \times 100.1 \text{ cm} = \underline{\hspace{2cm}}$
- $0.15 \text{ cm} + 1.15 \text{ cm} + 2.051 \text{ cm} = \underline{\hspace{2cm}}$
- $150 \text{ L}^3 \div 4 \text{ L} = \underline{\hspace{2cm}}$
- $505 \text{ kg} - 450.25 \text{ kg} = \underline{\hspace{2cm}}$
- $1.252 \text{ mm} \times 0.115 \text{ mm} \times 0.012 \text{ mm} = \underline{\hspace{2cm}}$
- $1.278 \times 10^3 \text{ m}^2 \div 1.4267 \times 10^2 \text{ m} = \underline{\hspace{2cm}}$