



Rule:

When adding or subtracting significant figures, the answer should have the same number of decimal places as the smallest number of decimal places in the numbers that were added or subtracted.



Example:

$$\begin{array}{r}
 101.25 \\
 + 3536.2 \\
 + 123.448 \\
 \hline
 3760.898 \\
 \hline
 \boxed{3760.9}
 \end{array}$$

← least precise number, only one digit after decimal
 ← digits to be dropped
 ← last digit retained
 ← answer round to one digit after the decimal

$$\frac{\quad}{20} =$$

Sometimes it helps to draw a line after the DECIMAL indicating the LEAST PRECISE NUMBER

Example 2:

(a)

$$\begin{array}{r}
 0.987 \\
 +125.1 \\
 -1.22 \\
 \hline
 124.867 = 124.9
 \end{array}$$

(b)

$$\begin{array}{r}
 0.765 \\
 -3.449 \\
 -5.98 \\
 \hline
 -8.664 = -8.66
 \end{array}$$

PART A: MULTIPLE CHOICE

- Solve: $3.12 \text{ g} + 0.8 \text{ g} + 1.033 \text{ g} = ?$
 - 5.0 g
 - 4.953 g
 - 5 g
 - 4.9 g
- When performing the calculation $34.530 \text{ g} + 12.1 \text{ g} + 1\,222.34 \text{ g}$, the final answer must have:
 - Three decimal places
 - Only one decimal place
 - Units of g^3
 - three significant figures

3. Solve: $345.009 \text{ g} - 23.009 \text{ g} = ?$
- (A) 322
 (B) 322.00 g
 (C) 322.000 g
 (D) 322 g
4. Solve: $13.004 \text{ m} + 3.09 \text{ m} + 112.947 \text{ m}$
- (A) 129.0 m
 (B) 129.04 m
 (C) 129 m
 (D) 129.041 m
5. Subtract: $7.987 \text{ m} - 0.54 \text{ m}$
- (A) 7.447 m
 (B) 7.4 m
 (C) 7.5 m
 (D) 7.45 m

PART B: WRITTEN RESPONSE

It's your turn ! Compute the answers with the correct number of significant figures. [15]

		ANSWER	CORRECT # OF SIG FIG
1.	$92.201 \text{ ml} + 293.00 \text{ ml} =$		
2.	$27.31 \text{ g} - 0.589 \text{ g} =$		
3.	$654 \text{ m} + 79.5 \text{ m} =$		
4.	$357.89 \text{ N} + 0.002 \text{ N} =$		
5.	$22.4420 \text{ kg} + 56.981 \text{ kg} =$		
6.	$67.5 \text{ cm} - 0.009 \text{ cm} =$		
7.	$71.86 \text{ L} - 13.1 \text{ L} =$		
8.	$2.25 \text{ s} + 6 \text{ s} =$		
9.	$17.95 \text{ mm} + 32.42 \text{ mm} + 50 \text{ mm} =$		
10.	$5.5 \text{ g} + 3.7 \text{ g} + 2.97 \text{ g} =$		
11.	$18.640 \text{ m} + 670.445 \text{ m} =$		
12.	$3.458 \text{ cm} + 53.252 \text{ cm} + 0.601 \text{ cm} =$		
13.	$74.160 \text{ ml} - 4.8 \text{ ml} - 0.470 \text{ ml} =$		
14.	$7000.40 \text{ m} + 6.2 \text{ m} + 6.32 \text{ m} =$		
15.	$13.59 \text{ hr} + 23.25 \text{ hr} + 20 \text{ hr} =$		