

Name key Period All

Quiz 1 – Operations with Accuracy and Precision

20 Points

Complete the following quiz answering each question completely and showing all work.

Label for quantity, unit, and label for each measurement below

23.85g Water	0.892atm CO ₂ gas
<u>23.85</u> <u>g</u> <u>Water</u>	<u>0.892</u> <u>atm</u> <u>CO₂</u>
quantity unit label	quantity unit label

Solve each problem to the correct number of significant figures [show unrounded and rounded]

25.39g + 12.763g	64.48m – 22.5m
<u>38.153g</u> <u>38.15g</u>	<u>41.98m</u> <u>42.0m</u>
unrounded rounded	unrounded rounded
3.39m · 18.83m	338.47m / 7.13s
<u>63.8337m²</u> <u>63.83m²</u>	<u>47.47124m/s</u> <u>47.47m/s</u>
unrounded rounded	unrounded rounded

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Quiz 2 – Graphing

Complete the following quiz answering each question completely and showing all work.

Data Table for volume (mL) vs mass (g)

Volume (mL)	15.0mL	30.0mL	45.0mL	60.0mL	75.0mL	90.0mL
Mass (g)	12.9g	26.9g	39.4g	53.0g	68.2g	83.2g

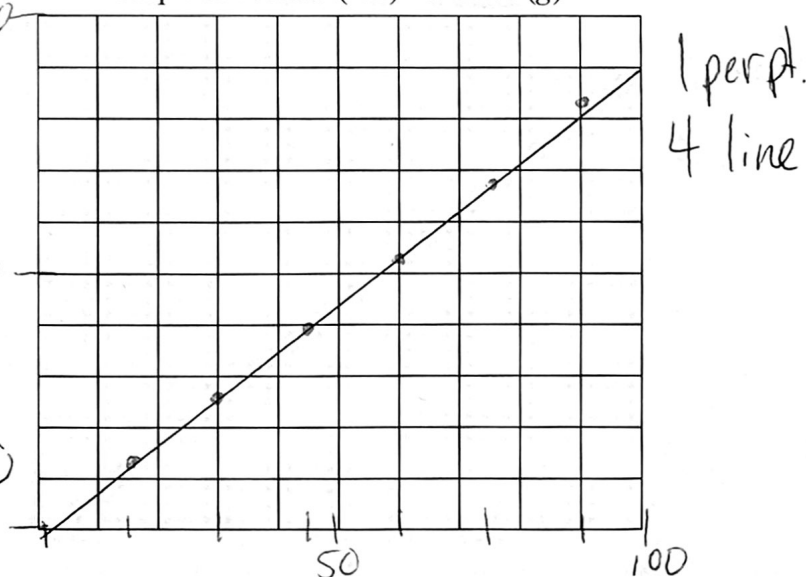
Calculate the slope from the points below
(15.0, 12.9) (x₁, y₁) and (75.0, 68.2g) (x₂, y₂)

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad (2)$$

$$m = \frac{68.2g - 12.9g}{75.0mL - 15.0mL} \quad (2)$$

$$m = \underline{0.92 \text{ g/mL}} \quad (4)$$

Graph the data above onto the graph
Graph of volume (mL) vs. mass (g)



Direct or Indirect
Relationship

Direct Relation (2)

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Quiz 3 – Density

Complete the following quiz answering each question completely and showing all work.

$m = 99.5\text{g}$, $v = 53.4\text{mL}$, $D = \underline{\hspace{2cm}} \text{g/mL}$ $D = \frac{m}{V} = \frac{99.5\text{g}}{53.4\text{mL}}$ $D = \underline{1.86\text{g/mL}}$	$D = 2.5\text{g/mL}$, $m = 91.3\text{g}$, $v = \underline{\hspace{2cm}} \text{mL}$ $V = \frac{m}{D} = \frac{91.3\text{g}}{2.5\text{g/mL}}$ $V = \underline{36.52\text{mL}}$ Units = $-\frac{1}{2}$
Find Volume for the following solid $l = 3.4\text{cm}$, $w = 4.9\text{cm}$, $h = 2.9\text{cm}$, $v = \underline{\hspace{2cm}} \text{mL}$ $V = l \cdot w \cdot h$ $V = 3.4\text{cm} \cdot 4.9\text{cm} \cdot 2.9\text{cm}$ $V = \underline{48.3\text{mL}}$	Find the density of the solid on the left $m = 21.4\text{g}$, $D = \underline{\hspace{2cm}} \text{g/mL}$ $D = \frac{m}{V} = \frac{21.4\text{g}}{48.3\text{mL}}$ $D = \underline{0.44\text{g/mL}}$

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Quiz 4 – Unit Conversions

Complete the following quiz converting from the given to the requested unit.

456.2in, convert to feet ($1\text{ft} = 12\text{in}$) $\frac{456.2\text{in}}{12\text{in}} = \underline{38.02\text{ft}}$	9.38cups, convert to quarts ($1\text{qt} = 4\text{cups}$) $\frac{9.38\text{cups}}{4\text{cups}} = \underline{2.35\text{qt}}$
2069m, convert to km $(1\text{m} = 0.001\text{km})$ $\frac{2069\text{m}}{1000\text{m}} = \underline{2.07\text{km}}$	0.715km, convert to cm $(0.001\text{km} = 100\text{cm})$ $\frac{0.715\text{km}}{0.001\text{km}} = \underline{71500\text{cm}}$