

Name Key (print name) Name _____ (sign name) *NA = not attempted*

Please show all work for full credit. "Confidence Booster" (worksheet) *NW = no work*

1 From the given list, circle all compounds. (not circling elements. You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (4 pts)

N₂ Mg SO₂ Se *(1 pt each)*

2 metric conversions (6 pts total)

(a) one Kilogram = 1000 g (2 pts each)

(b) rewrite what you wrote in (a) as 2 possible conversion factors with a numerator and denominator (put the numerator over the line and the denominator under the line (2 pt each)

Conversion factor #1 = $\frac{1 \text{ kg}}{1000 \text{ g}}$ Conversion factor #2 = $\frac{1000 \text{ g}}{1 \text{ kg}}$

3 How many significant figures are in the following numbers? (4 pts, 2 pts each)

7.34 x 10⁻³ 3 significant figures 0.04100 4 significant figures

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

87.9 kiloliters to quarts (1 liter = 1.06 quart)

1 pt
 $87.9 \text{ kL} \times \frac{1000 \text{ L}}{1 \text{ kL}} \times \frac{1.06 \text{ quart}}{1 \text{ L}} = 93174 \text{ quart}$
3 sig fig
 $9.32 \times 10^4 \text{ quart}$
1 pt *2 pt* *2 pt* *1 pt*

NW - 3
attempt - 3
2nd attempt - 4

NO pts off sig fig

upside down - 1

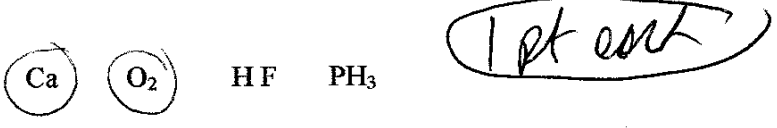
math - 1

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Please show all work for full credit. "Confidence Booster" (worksheet)

1 From the given list, circle **all elements**. (**not** circling compounds) You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (4 pts)



2 metric conversions (6 pts total)

(a) 1000 mL = one Liter (2 pts each)

(b) rewrite what you wrote in (a) as **2 possible conversion factors** with a numerator and denominator (put the numerator over the line and the denominator under the line (2 pt each)

Conversion factor #1 = $\frac{1000 \text{ mL}}{1 \text{ L}}$
 Conversion factor #2 = $\frac{1 \text{ L}}{1000 \text{ mL}}$

3 How many significant figures are in the following numbers? (4 pts, 2 pts each)

2.00 3 significant figures 00.042 2 significant figures

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

73.5 inches to meters (1 inch = 2.54 cm)

$73.5 \text{ inches} \times \frac{2.54 \text{ cm}}{1 \text{ inch}} \times \frac{1 \text{ meter}}{100 \text{ cm}} = 1.8669 \text{ meters}$
1.87 meters
 (3 sig fig)

1 pt

2 pt

2 pt

NW = -3
 attempt -3
 bad attempt -4
 no pts off sig fig

upside down -1

math -1

Name Key Name _____
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Please show all work for full credit. "Confidence Booster" (worksheet)

1 metric conversions (6 pts total)

(a) 100 centimeters = one meter (2 pts each)

(b) rewrite what you wrote in (a) as 2 possible conversion factors with a numerator and denominator (put the numerator over the line and the denominator under the line (2 pt each)

Conversion factor #1 = $\frac{100 \text{ cm}}{m}$ Conversion factor #2 = $\frac{m}{100 \text{ cm}}$

2 If the number that comes out of your calculator is the following, give the final correct number taking into account the significant figure and rounding up rules. (4 pts total, 2 pts each)

289.2 - 17.21 + 22.502 = 294.492 final correct # = 294.5
 (289.2/17.21) x 22.502 = 378.1277 final correct # = 378.1

$$\begin{array}{r} 289.2 \\ -17.21 \\ +22.502 \\ \hline \end{array}$$

3 Convert the following number into scientific notation. (assume the zeros are not significant but are only placeholders) (4 pts total, 2 pts each)

3520 $\rightarrow 3.52 \times 10^3$
 (sig fig - 1/2) (math - 1/2) (not rounded up - 1/2 pt)

Convert the following scientific notation into a non scientific notation number with the correct # of significant numbers.

2.3×10^{-2} $\rightarrow 0.023$
 (2 sig fig) (2 sig fig)

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

115.2 pounds to milligrams (453.6 grams = 1 pound)

$115.2 \text{ lb} \times \frac{453.6 \text{ g}}{1 \text{ lb}} \times \frac{1000 \text{ mg}}{1 \text{ g}} = 52254720$
 (1 pt) (2 pt) (2 pt) (4 sig fig)

5.225×10^7
 (NW = -3 attempt -3 bad attempt -4) (no pts off sig fig) (upside down - 1 pt)

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Please show all work for full credit. "Confidence Booster" (worksheet) *NW = no work*

1 metric conversions (6 pts total)

(a) 1000 meters = one kilometer (2 pts each)

(b) rewrite what you wrote in (a) as 2 possible conversion factors with a numerator and denominator (put the numerator over the line and the denominator under the line) (2 pt each)

Conversion factor #1 = $\frac{1000\text{ m}}{1\text{ km}}$ Conversion factor #2 = $\frac{1\text{ km}}{1000\text{ m}}$

2 If the number that comes out of your calculator is the following, give the final correct number taking into account the significant figure and rounding up rules. (4 pts total, 2 pts each)

899.2 + 17.111 - 8.992 = 907.319 final correct # = 907.3

$$\begin{array}{r} 899.2 \\ + 17.111 \\ - 8.992 \\ \hline \end{array}$$

(899.2 * 17.111) / 8.992 = 1711.1 final correct # = 1711
 4 sig. 5 sig. 4 sig. 8 sig. *not rounded up - 1/2 pt*

3 Convert the following number into scientific notation. (assume the zeros are not significant but are only placeholders) (4 pts total, 2 pts each)

0.07782 7.782×10^{-2} *sig fig - 1/2 pt math - 1/2 pt*

Convert the following scientific notation into a non scientific notation number with the correct number of significant numbers.

$3.78 \times 10^{+3}$ 3780 *am biguous 3.78 sig fig can't write showing correct sig fig*

4 Convert the following using dimensional analysis. Show work. If you come up with the final correct numerical answer but show no work, you will lose all points. (6 pts)

26.89 centimeter to feet (12 inches = 1 foot, 1 inch = 2.54 cm)

NW = -3 attempt -3 bad -4 attempt

$26.89\text{ cm} \times \frac{1\text{ inch}}{2.54\text{ cm}} \times \frac{\text{foot}}{12\text{ inches}} = 0.882217847$
1 pt 4 sig fig 2 pt 2 pt no pts off sig fig 1 pt 0.8822 correct sig fig

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N₂ Mg SO₂ Se

2 metric conversions (6 pts total)

(a) one Kilogram = _____ g (2 pts each)

(b) rewrite what you wrote in (a) as **2 possible conversion factors** with a numerator and denominator (put the numerator over the line and the denominator under the line (2 pt each)

Conversion factor #1 = _____ Conversion factor #2 = _____

3 How many significant figures are in the following numbers ? (4 pts, 2 pts each)

7.34 x 10⁺³ _____ significant figures 0.04100 _____ significant figures

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1 From the given list, circle **all elements**. (**not** circling compounds) You may want to look at the periodic table if you are unfamiliar with the symbols for the elements. (4 pts)

Ca O₂ HF PH₃

2 metric conversions (6 pts total)

(a) _____ mL = one Liter (2 pts each)

(b) rewrite what you wrote in (a) as **2 possible conversion factors** with a numerator and denominator (put the numerator over the line and the denominator under the line (2 pt each)

Conversion factor #1 = _____ Conversion factor #2 = _____

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1 metric conversions (6 pts total)

(a) _____ centimeters = one meter (2 pts each)

(b) rewrite what you wrote in (a) as **2 possible conversion factors** with a numerator and denominator (put the numerator over the line and the denominator under the line (2 pt each)

Conversion factor #1 = _____ Conversion factor #2 = _____

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3520 _____

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0.07782 _____

Convert the following scientific notation into a non scientific notation number with the correct number of significant numbers.

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