

CHE101 - Review/Practice - SF

Name: _____

Class: _____

Date: _____

Instructions: Answer the following questions. Show ALL work for problems to receive full credit. Make sure to include proper units and significant figures for all answers.

1. How many Significant Figures are in each of the following numbers:

- | | |
|----------------------------|------------|
| (a) 12,000 | 1(a) _____ |
| (b) 0.00452 | 1(b) _____ |
| (c) 98,302 | 1(c) _____ |
| (d) 1.0050 | 1(d) _____ |
| (e) 32.045 | 1(e) _____ |
| (f) 93,000. | 1(f) _____ |
| (g) 0.000309 | 1(g) _____ |
| (h) 3.45×10^8 | 1(h) _____ |
| (i) 100,000.002500 | 1(i) _____ |
| (j) 10.405 | 1(j) _____ |
| (k) 137.54 | 1(k) _____ |
| (l) 56.0 | 1(l) _____ |
| (m) 2,530 | 1(m) _____ |
| (n) 0.0098 | 1(n) _____ |
| (o) 1.250×10^{-3} | 1(o) _____ |
| (p) 1,203 | 1(p) _____ |
| (q) 0.056050 | 1(q) _____ |
| (r) 1,2003 | 1(r) _____ |
| (s) 1.89352×10^3 | 1(s) _____ |
| (t) 0.0500 | 1(t) _____ |

CHE101 - Review/Practice - SF

2. Write each of the following numbers in Scientific Notation.

- | | |
|---|------------|
| (a) 56,001 | 2(a) _____ |
| (b) 0.000 000 00050 | 2(b) _____ |
| (c) 12,000 with three significant figures | 2(c) _____ |
| (d) 0.00302045 with four significant figures | 2(d) _____ |
| (e) 45.00217 | 2(e) _____ |
| (f) 3,456 | 2(f) _____ |
| (g) 0.000 89 | 2(g) _____ |
| (h) 105,200 | 2(h) _____ |
| (i) 0.003 491 (rounded to 2 significant figures) | 2(i) _____ |
| (j) 459,034.27 (rounded to 3 significant figures) | 2(j) _____ |
| (k) 3,454 | 2(k) _____ |
| (l) 0.000 891 | 2(l) _____ |
| (m) 105,200 | 2(m) _____ |
| (n) 0.003 441 (rounded to 2 significant figures) | 2(n) _____ |
| (o) 459,834.27 (rounded to 3 significant figures) | 2(o) _____ |

CHE101 - Review/Practice - SF

3. Solve the following mathematical problems. Show all work. Express your answers to the proper number of Significant Figures.

(a) $(1.25) + (4.00304)$ 3(a) _____

(b) $(2.9) \times (156.25)$ 3(b) _____

(c) $\frac{(10.0) \times (1.2)}{2.45}$ 3(c) _____

(d) $\frac{2.50}{0.125}$ 3(d) _____

(e) $56,000 - 2,500.$ 3(e) _____

(f) $(12.5)(45.80)$ 3(f) _____

(g) $12.50 + 14.3 + 19.275$ 3(g) _____

(h) $\frac{(0.0051)(2.55)}{18.95}$ 3(h) _____

(i) $1,250 + 345 + 19$ 3(i) _____

(j) $(1.8 \times 10^3)(25.8)$ 3(j) _____

(k) $(12.4)(45.80)$ 3(k) _____

(l) $11.50 + 14.3 + 19.275$ 3(l) _____

CHE101 - Review/Practice - SF

4. Perform the following conversions. Show all work. Express your answers to the proper number of significant figures and with the proper units.

(a) Convert 12.0 miles to kilometers. 4(a) _____

(b) Convert 125 nm to cm. 4(b) _____

(c) Convert 1000. km to mm. 4(c) _____

(d) Convert 100. cubic inches to mL. 4(d) _____

(e) Convert 155 lbs to kg. 4(e) _____

(f) Convert 25.25 in. to cm. 4(f) _____

(g) Convert 240 μL to L. 4(g) _____

(h) Convert 0.250 nm to feet. 4(h) _____

(i) Convert 15.0 in^3 to L. 4(i) _____

(j) Convert 6.5×10^1 mi/hr to km/min 4(j) _____

CHE101 - Review/Practice - SF

5. How long (in days) will it take a rocket traveling 15,700 miles/hour to reach the moon given that the moon is 3.85×10^5 km from the earth? 5. _____
6. Given the following conversions convert 2.5 fleeps to bops. (2 hort = 3 flark, 1 flark = 2 bops, 7 fleeps = 2 gnomes, 5 gnomes = 3 flark). 6. _____
7. If the price of gasoline is \$3.09/gallon, what is the price in peso's/L given that 1.5×10^3 peso's = 1 dollar? 7. _____
8. The sun is 93 million miles from the Earth. How many minutes does it take for light from the sun to travel to the Earth if the velocity of light is 3.00×10^8 m/s? 8. _____