

Chapter 2 review homework

- 1) How many significant figures are in the numbers?
 - a) 35,101
 - b) 46,000
 - c) 0.000261
 - d) 150.
 - e) 0.02050
 - f) 3120.0
 - g) 100.0

- 2) Write the following numbers in scientific notation
 - a) 28,000
 - b) 0.000175
 - c) 2.5
 - d) 0.0000052
 - e) 480.
 - f) 0.0159
 - g) 1,000,000.

- 3) Round each number to the given number of significant figures and write your answer in standard notation
 - a) 64.256 (3 SF)
 - b) 0.0024612 (4 SF)
 - c) 56.852 (3 SF)

- d) 1.590 (2 SF)
- e) 4,800 (1 SF)
- f) 12,360 (3 SF)
- g) 4.690 (2 SF)

4) Round each number to the given number of significant figures and write your answer in scientific notation

- a) 360.55 (3 SF)
- b) 12.638 (4 SF)
- c) 18.95 (2 SF)
- d) 200.062 (4 SF)
- e) 0.00000499 (2 SF)
- f) 0.495 (2 SF)
- g) 320,598,000 (3 SF)

5) What are exact and inexact numbers? Provide an example for each

6) Solve the following problems, give proper significant figures and round if necessary

- a) 152×0.52
- b) $(1.348 \times 10^3)(3.5 \times 10^3)$
- c) $\frac{(524)(4.8)}{14.5}$
- d) $\frac{0.0475}{62.5}$
- e) $25.52 \times 340.$

7) Solve the following equations, round and put in scientific notation if needed

- a) $13.62+2.5+0.14$
- b) $0.32+0.56+1.5$

c) $75.45+19.28-12.90$

d) $0.0050+0.0024-0.000125$

e) $12,000+0.052-12.52$

f) $34.50-0.0059-12.452$

g) $1.5+0.205+0.855$

Answer Key

1)

a) 5 SF

b) 2 SF

c) 3 SF

d) 3 SF

e) 4 SF

f) 5 SF

2)

a) 2.8×10^4

b) 1.75×10^{-4}

c) 2.5×10^0

d) 5.2×10^{-6}

e) 4.8×10^2

f) 1.5×10^{-2}

g) 1.0×10^6

3)

a) 64.3

b) 0.002461

c) 56.9

- d) 1.6
- e) 5,000
- f) 12.4
- g) 1.7

4)

- a) 3.61×10^2
- b) 1.264×10^1
- c) 1.9×10^1
- d) 2.001×10^2
- e) 5.0×10^{-6}
- f) 5.0×10^{-1}
- g) 3.21×10^8

5) Exact numbers are without a doubt numbers: Number of people in the room

Inexact numbers are a guess that has uncertainty: Weight on a scale

6)

- a) 79 (2SF)
- b) 4.7×10^6 (2SF)
- c) 1.7×10^2
- d) 7.60×10^{-4}
- e) 868

7) S

a) 16

b) 2.4

c) 81.83

d) 0.0725

e) 12,000

f) 22.

g) 2.56