Significant Figures Worksheet 1 **Name_____**
Chemistry **Period ___ Date_____**

1. a. 62.001 The first sig fig is the ___ and the last is the ____. There are ____ sig figs.

b. 640 The first sig fig is the ___ and the last is the ____. There are ____ sig figs.

c. 200.0 The first sig fig is the ___ and the last is the ____. There are ____ sig figs.

d. 0.040 02 The first sig fig is the ___ and the last is the ____. There are ____ sig figs.

e. 1400. The first sig fig is the ___ and the last is the ____. There are ____ sig figs.

2. How many sig figs are in these numbers?

a. 0.5200 b. 1.005 c. 10,000 d. 20.900

e. 0.000 000 56 f. 790,001 g. 665.000 h. 0.010 000 060 500 910

3. A student has 860 mL of juice. She wants to give juice to seven people. How much juice does each student get?

860 mL / 7 people = Calculator answer _____

rounded answer = _____

4. You have a rectangular soccer field that is 161 feet long and 71 feet across. What is its area in square feet?

To solve this you multiply 161 ft × 71 ft. Your calculator gives you _____.

But, the number 161 has ___ sig figs and 71 has ____, so the answer can only have 2 sig figs. The answer, after rounding, should be _____.

5. Perform the following calculations and express the result with the correct number of significant figures. (Assume all numbers are *measurements*)

a. 47.0 / 2.2 b. 140 × 35

c. 5.88 / 220 d. 0.0050 × 0.042

6. An empty truck weighs 14,000 kg. A broken car weighs 590 kg What is the weight of the truck with the car inside?

The calculator answer would be _____.

14,000 kg has it's last sig fig in the _____ place, and 590 kg has it in the _____ place. Therefore, the answer should have its last sig fig in the _____ place. It should be rounded off and become _____.

7. More for you. Lucky you. Note: it helps to rewrite the problem and line up the decimal points like in "a."

a. 22.0
+ 5.28

b.0.042 + 1.229

c. 28 – 5.55

d. 0.086 – 0.39

e. 170 + 3.5

f. 170. + 3.5

g. 170.0 + 3.5

h. 170.00 + 3.5

i. 200 + 325 -688

j.0.003 + 0.0048 + 0.100

Selected Answers

1. a. 6, 1, 5sf b. 6, 4, 2sf c. 2,0 (the last 0), 4sf d. 4, 2, 4sf
e. 1, 0 (the last 0), 3. Note: This is how you write that you actually mean 1400 as in between 1399.5 and 1401.5, by putting in a decimal point. So writing 1400. means 4 sig figs while writing 1400 means only 2 sig figs.

2. a.2 b.4 c.1 d.5
e. 2 f.6 g.6 h.14

1. We should round the answer 122.8571429 to 120 mL/ person and record that as our answer instead.

2. Answer should be 11,000 square feet.

5. a. 21 b. 4900 c. 2.7
d. 0.000 21

6. 14,590; 1000's, 10's, 1000's, 15,000 kg

7. a.27.3 b.1.271 c.22
d. –0.30 e.170 f.174
g. 173.5 h.173.5 i.2800
j. 0.108