Name: _____

Per: ____

# Significant Figures Worksheet

Determine the number of significant figures in the following numbers.

| | | |
|---|---|---|
| 71 _____ | $6.738 \times 10^{-9}$ _____ | 0.080702 _____ |
| 5651.00_____ | 110 _____ | $3.645 \times 10^{-6}$ _____ |
| 78402 _____ | 23.0 _____ | 101.0 _____ |
| 96.00 _____ | 0.009007 _____ | 0.00334 _____ |
| 0.0308 _____ | $6.217 \times 10^{1}$ _____ | $9.3363 \times 10^{-2}$ _____ |
| 135.90 _____ | 0.040 _____ | $6.02 \times 10^{23}$ _____ |
| 7500 _____ | 0.602100 _____ | $5 \times 10^{15}$_____ |

Rewrite the numbers above representing the requested number of sig figs.

| | | |
|---|---|---|
| (1) _____ | (3) _____ | (4) _____ |
| (2) _____ | (1) _____ | (1) _____ |
| (4) _____ | (2) _____ | (1) _____ |
| (3) _____ | (1) _____ | (2) _____ |
| (2) _____ | (2) _____ | (3) _____ |
| (2) _____ | (1) _____ | (2) _____ |
| (1) _____ | (2) _____ | (1) _____ |

When collecting data using laboratory equipment, explain the rule for how many decimal places of accuracy we can represent in our measurements.

_____

_____

_____

_____

Using a balance that always reads 0.50 grams too low, a student obtains the mass of a beaker to be 50.62 grams. The student then adds some sugar to the beaker and, using the same balance, obtains a total mass of 69.88 grams. Is the mass of the sugar inaccurate by 0.50 grams? Defend your answer.

_____

_____

_____

_____

Why is it important to use the correct number of significant digits when expressing measurements or reporting answers?

_____

_____

_____