

Significant Figures Activity

Part 1: Sandwich Zeros

Step 1: **Color** all of the sandwich zeros below with a YELLOW pencil.

Step 2: **Observe** each of the examples given below. **What do you notice to be true?**

Step 3: With your partner, **create** a rule about sandwich zeros *based on what you observed*. **Write** this rule here:

a.) $1.076 = 4 \text{ sig figs}$

d.) $203 = 3 \text{ sig figs}$

b.) $101 = 3 \text{ sig figs}$

e.) $2000.3 = 5 \text{ sig figs}$

c.) $100.7 = 4 \text{ sig figs}$

f.) $7035 = 4 \text{ sig figs}$



Part 2: Leading Zeros

Step 1: **Color** all of the leading zeros below with a RED pencil. **Color** any sandwich zeros with a YELLOW pencil.

Step 2: **Observe** each of the examples given below. **What do you notice to be true?**

Step 3: With your partner, **create** a rule about leading zeros *based on what you observed*. **Write** this rule here:

a.) $0.07607 = 4 \text{ sig figs}$

d.) $0.01 \times 10^{-3} = 1 \text{ sig figs}$

b.) $0.794 = 3 \text{ sig figs}$

e.) $0.000324 = 3 \text{ sig figs}$

c.) $0.0000084009 = 5 \text{ sig figs}$

f.) $0.07324 = 4 \text{ sig figs}$



Part 3: Trailing Zeros (careful!! This one is tricky!)

Step 1: **Color** all of the trailing zeros below with BLUE pencil. **Color** any sandwich zeros with a YELLOW pencil and any leading zeros with a RED pencil.

Step 2: **Observe** each of the examples given below. **What do you notice to be true?**

Step 3: With your partner, **create** a rule about trailing zeros *based on what you observed*. **Write** this rule here:

CLUE!!

NO
NO
YES a.) 100 = 1 sig fig

YES
YES
YES b.) 100. = 3 sig figs

NO
NO
YES
YES d.) 25600 = 3 sig figs

NO
YES
YES
YES e.) 0.3000 = 4 sig figs

YES
YES
YES
YES c.) 200.00 = 5 sig figs

YES
YES
NO
NO
YES
YES
YES
YES f.) 0.003074000 = 7 sig figs



Part 4: Combined Practice

Step 1: **Color** all of the Trailing zeros below with BLUE pencil.

Color any sandwich zeros with a YELLOW pencil.

Color any leading zeros with a RED pencil.

Step 2: **Identify** the number of sig figs in each number given.

- | | | |
|------------------|--------------------|---------------------|
| 1) 0.00056 _____ | 5) 100.0 _____ | 9) 56.9000 _____ |
| 2) 1056.30 _____ | 6) 0.0020250 _____ | 10) 50670 _____ |
| 3) 220 _____ | 7) 1700 _____ | 11) 8060.7000 _____ |
| 4) 6378.00 _____ | 8) 25.0 _____ | 12) 3570 _____ |