Chemistry I Name _____

Date _____ Per _____

$ZnCl_{??}$ Lab Mistakes: When Bad Things Happen

Imagine you're doing a lab like the $ZnCl_{??}$ lab we just did and this time you've got perfect equipment so your results should be perfect, but the following mistakes were made. How would each of these affect your final answer?

1. When you weigh the empty beaker there's some drops of water in it.
    a) The ??? will be too high.
    b) The ??? will be too low.
    c) The ??? won't be affected by this mistake.

Why? _____

_____

2. Some of the zinc gets knocked out of the beaker <u>before</u> you weigh the zinc plus the beaker.
    a) The ??? will be too high.
    b) The ??? will be too low.
    c) The ??? won't be affected by this mistake.

Why? _____

_____

3. Some of the zinc gets knocked out of the beaker <u>after</u> you weigh the zinc plus the beaker.
    a) The ??? will be too high.
    b) The ??? will be too low.
    c) The ??? won't be affected by this mistake.

Why? _____

_____

4. You put too much hydrochloric acid in with the zinc.
    a) The ??? will be too high.
    b) The ??? will be too low.
    c) The ??? won't be affected by this mistake.

Why? _____

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5. You put too little hydrochloric acid in with the zinc so that not all the zinc can react.
    a) The ??? will be too high.
    b) The ??? will be too low.
    c) The ??? won't be affected by this mistake.

Why? _____

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6. Several large drops of the liquid in the beaker spatter out of the beaker while you're boiling off the water.

a) The ??? will be too high.
b) The ??? will be too low.
c) The ??? won't be affected by this mistake.

Why? _____

_____

7. Not all of the water is boiled away.

a) The ??? will be too high.
b) The ??? will be too low.
c) The ??? won't be affected by this mistake.

Why? _____

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8. Your balance has been weighing everything 2.5 grams heavier than it should.

a) The ??? will be too high.
b) The ??? will be too low.
c) The ??? won't be affected by this mistake.

Why? _____

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9. You find out when you're all done that you've been using a beaker that's 10.0 grams heavier than everybody else's.

a) The ??? will be too high.
b) The ??? will be too low.
c) The ??? won't be affected by this mistake.

Why? _____

_____

10 While carrying the beaker back to your lab table you trip and dump out about a quarter of the white powder.

a) The ??? will be too high.
b) The ??? will be too low.
c) The ??? won't be affected by this mistake.

Why? _____

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Kind of makes you appreciate the patience of Lavoisier, doesn't it? So many things can go wrong!