## Rounding numbers

For baking, measurements need to be rounded to the **tens** place.

To round numbers, first, figure out to which place the number needs to be rounded. Then, look to the number to the right of it; if that number is **less** than **4 you round down.** If the number is **5 or _greater_ you must round up.**

For example:
    25.81oz.
In this decimal the 8 is in the tens place and the 1 is in the hundredths place. Since the hundredths place is less than 5 we will round down  25.8 oz.

    76.35%
In this decimal the number in the hundredths place is 5 so we will round up. This new number is      76.4%

## Converting measurements

### 16 oz. are in 1 pound
### Always convert measurements into ounces!

If you have a formula calling for 3 pounds of butter, before anything, first convert it to ounces.
    Multiply 3lbs. x 16oz. equals 48 ounces

If you have a formula calling for 2 pounds 4 ounces of sugar convert the 2 pounds into ounces then add the extra 4 ounces.
    Multiply 2lbs. x 16oz. equals 32 ounces.  Then add the extra 4 ounces to give a final total of 36 ounces.

If you have a formula with a fraction don't forget to round up or down. Example;
    4pounds 7 ounces of flour needs to be _doubled_ in a formula.

First convert pounds to ounces!  4lbs. x 16oz. equals 64 oz.  Now add the extra 7 ounces. Totaling  71oz. but wait, you want to _double_ the original. So, multiply 71oz. by  2 equals 142 ounces.

## To convert back into pounds

(We will continue to use the example above) divide 142 ounces by 16 ounces (16oz. in a pound.) equals 8.875.  Don't look at the numbers after the decimal; that number is  a fraction of a pound.  Just look at the first 8.  That is how many pounds are in 142 ounces.  To double check, **always double check,** multiply 8

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0.044, no problem! Just move the decimal two places to the right 4.4% You still have a decimal. To get rid of the decimal round down because the number is lower than 5. This equals 4%.

Now you have all of your percentages just plug them back in.

| | | |
|---|---|---|
| Flour | 50 oz. | 100% |
| Sugar | 13 oz. | 26% |
| Butter | 4 oz. | 8% |
| Total | 67 oz. | 134% |

## Converting To A New Yield

Your original formula from above yields 67 oz. but you need to make 7 pounds for a dinner party.

First convert 7 pounds into ounces. 7lbs. x 16 oz. (16oz. in a 1 pound) equals 112 oz. this is your new yield.

Next convert your total percent back into a decimal. So, 134% move the decimal **two places to the left** equals 1.34.

Divide your new yield by your decimal. 112 oz divided by 1.34 equals 83.58209oz. Don't worry about the 209..... don't even look at it. Just look at 83.58oz. Now you want a nice, easy number to work with so round to the tens place, 83.6oz. (because 8 is greater than 5 you round up).

83.6oz. is your weight for flour.

| | | |
|---|---|---|
| Flour | 83.6oz. | 100% |
| Sugar | | 26% |
| Butter | | 8% |
| Total | | 134% |

Next convert the percentages for the remaining ingredients back into decimals and multiply them by the weight of flour, this will give you their weights.

Sugar:      26% move the decimal two places to the left equals .26 multiplied by the weight of flour, 83.6 oz equals 21.736oz. Forget about the 6..... so the new number is 21.73oz. 3 is less than 5 is we will round down to 21.7oz. of sugar.

Butter:      8% move the decimal two places to the left .08 multiplied by the weight of flour, 83.6oz. equals 6.688oz. Forget about the 8.... the new number is 6.68oz. 8 is greater than 5 is we will round up to 6.7oz. of butter.

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Let's plug these numbers back in:

| | | |
|---|---|---|
| Flour | 83.6oz. | 100% |
| Sugar | 21.7oz. | 26% |
| Butter | 6.7oz. | 8% |
| Total | 112 oz. | 134% |

**\*Note: Don't forget to add all your weights back together to make sure you have the correct yield.**

112 oz. divided by 16oz. ( 16oz. in a pound) equals 7 pounds, just in time for your dinner party!

Good Luck....