

## Measuring Mass Using a Triple Beam Balance

## Parts of the triple beam balance:



A close-up look at the beams:

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 g |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 0 | 100 | 200 | 300 | 400 | 500 g |  |  |  |  |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 g |

The scale of the back beam (the top beam in the diagram) is $\qquad$ grams.

The scale of the middle beam is $\qquad$ grams.

The scale of the front beam (the bottom beam in the diagram) is $\qquad$ grams.

The largest mass that can be measured with the triple beam balance is $\qquad$ grams (the of all three beams).


## Steps for Using the Triple Beam Balance

1. Make sure the $\qquad$ is at the "zero" mark.
2. The balance must be $\qquad$
$\qquad$ before you are able to get an accurate measurement. To do this, turn the $\qquad$ until the white line on the pointer lines up EXACTLY with the zero line.
3. Place the object you wish to measure on the $\qquad$ .
4. Move the rider on the middle beam (the $\qquad$ rider) to the right one notch at a time. When the pointer dips below the zero line, move the rider back one notch to the left.
5. Move the rider on the back beam (the $\qquad$ rider) to the right one notch at a time. When the pointer dips below the zero line, move the rider back one notch to the left.
6. Slide the rider on the front beam (the $\qquad$ rider) to the right. Slide this rider until the pointer lines up EXACTLY with the zero line.
7. Add the values shown by the riders on each beam to obtain the mass of the object. Make sure to include units! (When using a triple beam balance, the units will always be $\qquad$ .)

## Reading the Beams

Read the riders on the balances shown below to find the mass in each situation.

1) $\qquad$ $+$ $\qquad$
$\qquad$
$\qquad$ grams
medium small

small

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 g |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 0 | 100 | 200 | 300 |  | 400 | 500 g |  |  |  |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 g |



