**Siena College’s 33rd Annual** **High School Programming Contest**

**Sponsored by Transfinder**

**June 2, 2021**

###### **Gold Problem #2:  Off To The Races**

Background Information:

 In this problem, you will be modeling a race between three runners, **1**, **2** and **3**.  They are running to a finish line, which is 100 yards away from the general starting line.  Each runner has their own speed (yards per sec).  However, some (and possibly all) runners may have a head start.

Your program will be to print the finishing order between runners **1**, **2** and **3**.  The winner is printed first, followed by the second and third place finishers on the same output line separated by a space.  If there is a tie, the runner with who ran further (had the smallest head start) is listed first. If there is a tie and the runners ran the same distance then the smaller number must be listed first in the output.

Programming Problem:

Input:  On one input line, six integers: runner **1**’s speed, runner **1**’s starting position, runner **2**’s speed, runner **2**’s starting position, runner **3**’s speed, and runner **3**’s starting position.

Note that a starting position of 0 means the runner needs to run the entire 100 yards. A starting position of 10 means the runner has a 10 yard head start and needs to run 90 yards.

The constant speed will be a positive integer ≤ 20 and the starting position will be a non-negative integer ≤ 99.

Output: The order of finish.

Example 1: Input:

 6 10 7 0 8 20

 Output:

3 2 1

Example 2: Input:

 5 10 5 0 5 0

 Output:

1 2 3

Example 3: Input:

 1 80 10 0 5 0

 Output:

2 3 1

Example 4: Input:

 5 25 10 0 10 0

 Output:

2 3 1