

## Golf Course

A golf course has 18 holes. Each hole has an index from 1 to 18. Index 1 is the hardest hole and index 18 is the easiest hole.

## Players

Each player has a handicap in the range [0-54]. The following are some examples of how handicaps works:

- A player with a handicap of 6 receives “one free stroke” on hole indexes 1-6 (the six most difficult holes).
- A player with a handicap of 18 receives “one free stroke” on every hole (indexes 1-18).
- A player with a handicap of 25 receives “one free stroke” on indexes 1-18 and an additional “one free stroke” on indexes 1-7. Overall the player thus receives “two free strokes” on indexes 1-7 and “one free stroke” on indexes 8-18.
- A player with a handicap of 36 receives “two free strokes” on every hole (indexes 1-18).
- A player with a handicap of 40 receives “two free strokes” on every hole (indexes 1- 18) and an additional free stroke on indexes 1-4. Overall the player thus receives “three free strokes” on indexes 1-4 and “two free strokes” on indexes 5-18.
- A player with a handicap of 54 receives “three free strokes” on every hole (indexes 1-18).

Every player takes some number of strokes on each hole. A player's net strokes count is determined by subtracting the number of "free strokes" she receives on the hole from the number of strokes taken.

Score to par	Points
-7	9
-6	8
-5	7
-4	6
-3	5
-2	4
-1	3
0	2
1	1
2+	0

A player's score to par on each hole is determined by subtracting the hole's par from the player's net stroke count. Points are awarded as shown above. Each hole is a par 3, 4, or 5.

## Example Handicap: 18

A player with a handicap of 18 receives a free stroke on every hole. Assume she takes 6 strokes on a par 4. Her net stroke count is 5. Her score to par is  $5 - 4 = 1$ . Thus she is awarded 1 point. Assume the same player takes 5 strokes on a par 5. Her net stroke count is 4. Her score to par is  $4 - 5 = -1$ . She is thus awarded 3 points. Assume the same player takes 2 strokes on a par 3. Her net stroke count is 1. Her score to par is  $1 - 3 = -2$ . She is thus awarded 4 points.

[illegible]

### Example Handicap: 0

A player with a handicap of 0 receives no free strokes on any hole. Assume she takes 4 strokes on a par 4. Her net stroke count is 4. Her score to par is  $4-4 = 0$ . She is thus awarded 2 points.

Hole	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
In-dex	16	4	8	2	18	14	10	6	12	11	15	5	13	1	17	7	3	9
Free	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### Example Handicap: 20

A player with a handicap of 20 receives two free strokes on hole indexes 1-2 and one free stroke on hole indexes 3-18. Assume she takes 5 strokes on the par 4 index 2. Her net stroke count is 3. Her score to par  $3-4 = -1$ . She is thus awarded 3 points. Assume she takes 6 strokes on the par 5 index 15. Her net stroke count is 5. Her score to par is  $5-5 = 0$ . She is thus awarded 2 points.

Hole	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
In-dex	16	4	8	2	18	14	10	6	12	11	15	5	13	1	17	7	3	9
Free	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Free				1										1				

### Example Points calculated for Handicap: 14

Hole	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Par	4	5	3	4	4	5	3	5	3	5	3	4	4	4	4	5	4	3
In-dex	16	4	8	2	18	14	10	6	12	11	15	5	13	1	17	7	3	9
Free		1	1	1		1	1	1	1	1		1	1	1		1	1	1
Strokes	4	7	3	5	10	7	4	12	4	5	3	4	4	5	5	5	4	4
Net	4	6	2	4	10	6	3	11	3	4	3	3	3	4	5	4	3	3
Points	2	1	3	2	0	1	2	0	2	3	2	3	3	2	1	3	3	2