

CTF Rating Points

$$\left(\frac{p}{b} + \frac{1}{t}\right) * w$$

- p is the points of your team
- b is the points of the first team
- t is the position of your team
- w is the rating of the CTF

Remarks

- At maximum you can get $2 * w$ as points from a CTF
 - w for being the first team in the CTF
 - w for getting the same points as the first team (in case of tie)
- You get points from two things (formula below):
 - Team points compared to first team (ratio, maximum 1)
 - Team position in leaderboard (ratio, maximum 1)

$$w \cdot \frac{p}{b} + w \cdot \frac{1}{t}$$

- A high rating CTF that its easy (and gets full cleared) gives a lot of points (more than w)
 - Usually it will get downvoted to lower the rating for next year
 - See <https://ctftime.org/event/2641>

CTFTime Team Rating

Add the 10 highest CTF Rating Points for the team during a period (during the current year)

and, if you organized a CTF, then you add $2 \cdot w$ to your rating sum (not documented)

Time window note from CTFTime:

> time window of 18 months used b/c event time can shift within a year.

Calculator

```
#!/usr/bin/env -S uv run --script
```

```
from math import floor
```

```
# Get user inputs
```

```
team_points = float(input("[>] Team points: "))
```

```
best_points = float(input("[>] Best points: "))
```

```
team_place = float(input("[>] Team place: "))
```

```
total_teams = float(input("[>] Total teams: "))
```

```
weight = float(input("[>] Weight: "))
```

```
# Calculate coefficients
```

```
points_coef = team_points / best_points
```

```
place_coef = 1 / team_place
```

```
# Calculate and display rating
```

```
if points_coef > 0:
```

```
    e_rating = (points_coef + place_coef) * weight
```

```
    print(f"[+] Final rating: {e_rating:.3f}")
```

```
else:
```

```
    print("[!] No points")
```