

## 2.19 LAB: Caffeine levels

A half-life is the amount of time it takes for a substance or entity to fall to half its original value. Caffeine has a half-life of about 6 hours in humans. Given caffeine amount (in mg) as input, output the caffeine level after 6, 12, and 24 hours.

Output each floating-point value with two digits after the decimal point, which can be achieved by executing `cout << fixed << setprecision(2);` once before all other cout statements.

Ex: If the input is:

```
100
```

the output is:

```
After 6 hours: 50.00 mg
After 12 hours: 25.00 mg
After 24 hours: 6.25 mg
```

Note: A cup of coffee has about 100 mg. A soda has about 40 mg. An "energy" drink (a misnomer) has between 100 mg and 200 mg.