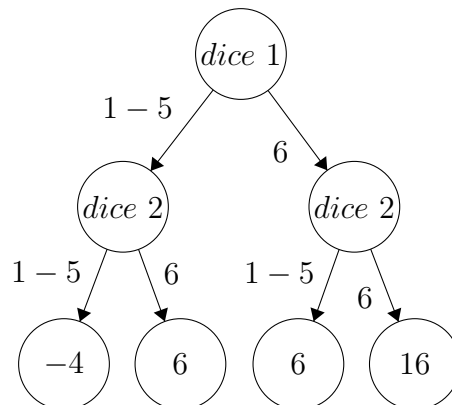


Exercise 1a



There exists a chance of $(\frac{5}{6})^2 = 69\%$ of losing if you only play once.

If you decide to play twice your chances of losing money drop below 50% to $(\frac{5}{6})^4 = 48\%$, making it a fair game for you.

The average expected income per game is $E(w) = (\frac{5}{6})^2 \cdot (-4) + 2 \cdot \frac{5}{6} \cdot \frac{1}{6} \cdot 6 + (\frac{1}{6})^2 \cdot 16 = 1.56$ Euro.

Exercise 1b

Prisoner A \ Prisoner B	Schnitches on A	Stays silent
Snitches on B	3 Yrs \ 3 Yrs	0 Yrs \ 5 Yrs
Stays silent	5 Yrs \ 0 Yrs	0.5 Yrs \ 0.5 Yrs

Tabelle 1: Prison sentences

[illegible]

```

graph TD
    2_0((2)) --> 3_1((3))
    2_0 --> 2_1((2))
    3_1 --> 2_2((2))
    3_1 --> 3_2((3))
    2_1 --> 3_3((3))
    2_1 --> 1_1((1))
    2_2 --> 1_2((1))
    3_2 --> 3_4((3))
    3_2 --> 1_3((1))
    3_3 --> 1_4((1))
    3_3 --> 1_5((1))
    1_1 --> 1_6((1))
    1_1 --> 0_1((0))
    1_6 --> 0_2((0))
    1_6 --> 0_3((0))
    0_1 --> 0_4((0))
  
```

Exercise 2c DFIDF

